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ABSTRACT

The Academic Foundations Department at Rutgers Camden College sponsored an Educational Consortium in Instruction during the 1974-75 academic year. The purpose of the consortium was: (1) to promote a closer unity between the academic disciplines, educators in the urban community, students, and the academic support department; (2) to focus on the teaching-learning aspect of higher education; and (3) to engage in research into existing innovations in instruction and foster new ones. Evaluation of the Educational Consortium examines its successes and failures. Virtually all criteria were met except for those pertaining to the teaching experiments. (Author/KB)

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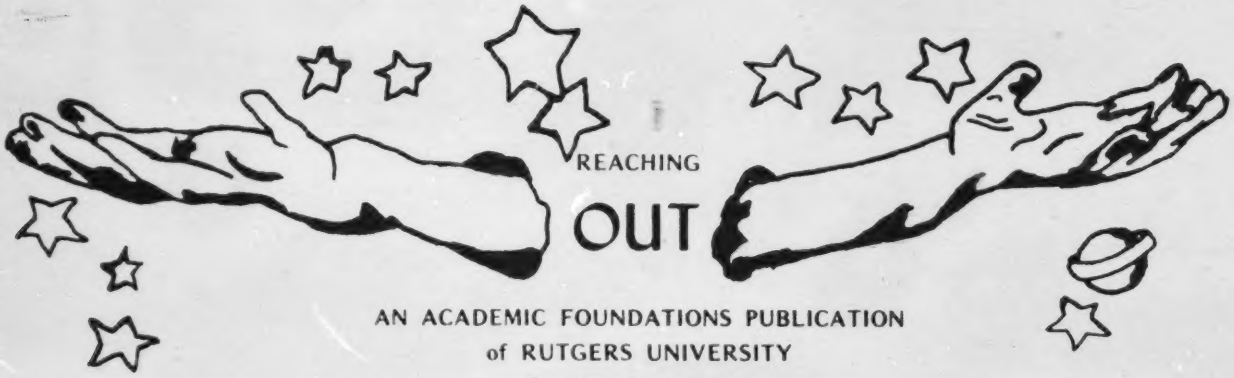
A DESCRIPTION AND EVALUATION OF THE EDUCATIONAL CONSORTIUM IN INSTRUCTION



AN ACADEMIC FOUNDATIONS PUBLICATION
of RUTGERS UNIVERSITY
Camden, New Jersey

ACADEMIC FOUNDATIONS DEPARTMENT
CAMDEN COLLEGE OF ARTS AND SCIENCES
RUTGERS UNIVERSITY
CAMDEN, NEW JERSEY

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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SUBMITTED BY: FRANK A. FRATOE

DATE: AUGUST 4, 1975

A DESCRIPTION AND EVALUATION OF THE EDUCATIONAL CONSORTIUM IN INSTRUCTION

ACADEMIC FOUNDATIONS DEPARTMENT
CAMDEN COLLEGE OF ARTS AND SCIENCES
RUTGERS UNIVERSITY
CAMDEN, NEW JERSEY

SUBMITTED BY: FRANK A. FRATOE
DATE: AUGUST 4, 1975

RUTGERS UNIVERSITY *The State University of New Jersey*

ACADEMIC FOUNDATIONS DEPARTMENT
Armitage Hall, Room 401
311 N. 5th Street
Camden, New Jersey 08102

August 4, 1975

Dear Colleague:

The Academic Foundations Department at Rutgers Camden sponsored an Educational Consortium in Instruction during the 1974-75 academic year. The purpose of the consortium was three-fold:

(1) to promote a closer unity between the academic disciplines, educators in the urban community, students, and the academic support department

(2) to focus on the teaching-learning aspect of higher education

(3) to engage in research into existing innovations in instruction and foster new ones on this campus. Many interesting activities and discussions grew out of the consortium

Enclosed you will find an evaluative report of the Educational Consortium which contains elaborative data on its successes and failures. We hope that this document will stimulate other institutions to pursue this most important aspect of higher education - improved instruction.

We invite your comments and questions.

Sincerely,

Miriam T. Chaplin

Miriam T. Chaplin
Project Coordinator

MTC/ec

encl.

TABLE OF CONTENTS

SECTION		PAGE
	Introduction	1
I	Evaluating an Educational Program	1
II	Background of the Educational Consortium	3
III	Objectives of the Educational Consortium	5
IV	Resources of the Educational Consortium	7
V	Activities of the Educational Consortium	8
VI	Results and Evaluation	22
VII	Recommendations	24

APPENDICES

A	Model for Development and Evaluation of the Educational Consortium in Instruction	25
B	Budget for the Educational Consortium	27
C	List of Innovative College Teaching Methods	34
D	Description and Evaluation of an Innovative Teaching Experiment Conducted in Reading 114 (Written by the Instructor, Ms. Margaret Hoppe)	44

Introduction

This report attempts to describe and evaluate the Educational Consortium in Instruction, a project undertaken by the Academic Foundations Department of Camden College of Arts and Sciences (CCAS), Rutgers University, during the 1974-75 academic year. The Educational Consortium, a group of faculty, students, and community educational leaders who wished to focus on the teaching-learning relationship at CCAS, was supported by a special grant from the Educational Opportunity Fund (E.O.F.), New Jersey Department of Higher Education. To some degree, this report is meant to satisfy the E.O.F. requirement that an evaluation be submitted at the termination of the program. But the document is also intended to illustrate a new educational project that may serve as a model for replication in other institutions where improving the quality of instruction is deemed a worthy goal.

In the following pages, seven areas of information will be covered, i.e., steps taken in developing and evaluating educational programs, preliminary conceptions of the Educational Consortium, specific objectives designed to achieve the overall program goal, personnel and material resources, activities performed by Consortium participants, results evaluated according to pre-established criteria, and recommendations for expediting similar programs. Several appendices will be included that document various aspects of the Consortium's operation. Individuals who have contributed their time and effort to the program are cited in the text; their assistance is gratefully acknowledged.

1. *Evaluating an Educational Program*

In order to understand the procedures used in this report to evaluate the Educational Consortium in Instruction, it will be necessary first to designate the steps that must be followed in developing and evaluating any educational program. An educational program, whatever its purpose or the institutional level at which it is implemented, consists of a group of activities, materials, and personnel organized to attain particular objectives associated with the teaching-learning process. A viable program also requires the identification of specific educational outcomes and the costs involved in achieving those outcomes. Evaluation, which may be performed continuously during program operation or applied only at the end, would be impossible without the systematic consideration of all program data. The complexity of that data will determine the complexity of evaluational strategies. Thus, the evaluation of small "units" within the teaching-learning process is considerably less elaborate than the evaluation of a total institution such as a college or university system. Program evaluation falls somewhere betweeen the two on a theoretical scale of complexity.

Evaluation can be facilitated by planning procedures that establish in advance every step of program development. These steps, which will be described briefly as they pertain to educational innovation, are the following:

(1). *Institutional Context.* The school, college, or other educational institution must be identifed along with its chief characteristics and major operational goals. A convincing attempt must be made to show that existing programs or policies do not meet the educational needs that are critical to the institution's proper functioning. Two types of innovative programs that may be employed to bridge the gap between "what is" and "what ought to be" are those designed to meet *learner needs* (e.g., the need to improve reading skills) and those designed to meet *institutional needs* (e.g., the need to develop a new budgeting and accounting system). This report will examine and evaluate the former type.

(2). *Overall Program Goal.* An educational program must be directed toward the accomplishment of some purpose within the teaching-learning process. Planners should

have a clear idea of what their program will eventually do in securing educational advancement; otherwise they may experience confusion in developing effective program activities. Of course, goals have to be created that satisfy, as directly as possible, at least one of the broader learner or institutional needs which have been perceived as critical. The overall goal for the Educational Consortium in Instruction will be discussed in section II of this report.

(3). *Specific Program Objectives.* Program objectives must relate to the overall goal and be sufficiently numerous to encompass the major anticipated outcomes. Conversely, objectives must be few enough to permit practical collection of data concerning their degree of attainment. The exact number of objectives will be determined by balancing these two considerations. Each objective should contain an expected level of success (criteria) to be ascertained by the use of measurable or observable data, and each should designate an estimated time period for achievement (six months, one year, etc.).

Innovative programs do not require completely original objectives as long as they include some features which are new to the host institution. Specific objectives for the Educational Consortium will be described in section III.

(4). *Program Resources.* Everything that contributes to the realization of program objectives can be termed "resources." One obvious resource consists of monetary funds which are allocated in the program budget. Funds may be secured from outside sources, such as governmental agencies or private foundations, or they may be obtained from the institution's regular budgetary allotments. A second major resource consists of people, i.e., those who are needed to achieve objectives by planning and executing program activities. Part-time staff and consultants can be utilized in some cases, but a minimum number of full-time personnel must be present to give the program continuous direction. Funds and personnel for the Educational Consortium, along with special material resources, will be listed in section IV.

(5.) *Program Activities.* Objectives can be reached only by the application of material and human resources to particular activities which are chosen for their instrumental value. The selection of activities is made by the program director, alone or in consultation with others, on the basis of practical considerations such as time limitations, teaching-learning environment, precedent set by similar programs, and so on. Once activities are chosen, staff members must employ their limited resources to plan and carry out the activities as readily as possible.

However, when implementing innovative educational programs, it may be necessary to adopt activities so novel to the institution that they must be developed slowly to insure full acceptance. Section V of this report will indicate how activities for the Educational Consortium were conceived and implemented.

(6). *Results and Evaluation.* Quantitative and qualitative data that have been collected from program activities must be evaluated according to pre-arranged criteria established in the "program objectives" stage. Results or outcomes may take the form of scores on standardized tests, survey (interview and questionnaire) information, writen reports, observation-derived checklists, financial ledgers, or other substantive data. Application of evaluation criteria to the results should produce answers to these questions: Did the actual results match those anticipated in the program objectives? What aspects of program activities were most successful and which were least successful? Were the results achieved done so within budgeted resources? Were the educational outcomes conducive to future progress of the institution? What recommendations can be made for future development of similar programs? These are the questions, as they pertain to the Educational Consortium, that will be answered in sections VI and VII.

II. *Background of the Educational Consortium*

Camden College of Arts and Sciences is the only full-scale academic unit of Rutgers University in Southern New Jersey. The sixteen acre campus is adjacent to downtown Camden and contains six modern academic buildings along with several renovated older structures. The 2700 students of the college are predominatly drawn from Burlington, Camden, and Gloucester counties which constitute part of the nation's fourth largest metropolitan area. The students, most of whom commute to college, bring with them the diverse backgrounds of a mixed urban-suburban population. They study in twenty-five academic departments, with over thirty major programs. The chief mission of CCAS is to serve these students by developing and securing a strong liberal arts curriculum at the undergraduate level. CCAS provides further opportunities in a limited number of graduate programs and in a wide range of non-degree oriented educational experiences designed to meet the needs of urban citizens.

Considering the location and mission of Camden College of Arts and Sciences, it is not unusual that many non-traditional students have enrolled in the institution. Low-income students, educationally disadvantaged young people, minorities, veterans, and older adults are attracted by the college's favorable social and financial climate to continue their formal education. However, these new students bring special learning needs to an institution that has developed instructional methods and processes for more traditional students who, until recently, have formed the learning "public" at CCAS. Non-traditional students, unlike their predecessors, do not always relate well to the standard academic procedure of classroom lecture-discussion and may obtain very little learning value from this arrangement. For example, the Educational Testing Service found in a 1972 survey of CCAS instructional units that the general quality of lectures was rated less than good by a majority of students in 25 per cent of the courses; more disturbingly, the overall value of discussion was rated less than good by a majority of students in 43 per cent of the courses. Perhaps these figures point to insufficient preparation or poor classroom delivery on the part of some instructors. Nevertheless, there is room for speculation that the techniques themselves may be inadequate to reach the minds of the new students.

Members of the Academic Foundations Department are acutely aware of the learning difficulties of non-traditional students. The department offers remedial and developmental instruction for educationally disadvantaged students who enter college without adequate skills in reading, mathematics, or other basic areas. It has been the experience of departmental instructors that these students, who enroll through the Educational Opportunity Fund Program (E.O.F.), often respond more readily to innovative teaching methods than to traditional ones. Academic Foundations personnel have been convinced that new techniques can aid the learning process of E.O.F. students as well as other undergraduates —in all disciplines represented at CCAS. However, until recently no vehicle existed to inform other faculty members of this possibility and to suggest instructional alternatives that might be adopted. The department long desired to create a special educational program devoted to *improving the teaching-learning relationship at CCAS.*

The opportunity to pursue this goal came in January, 1974, when the department received notification from Ms. Juanita High, Executive Director of E.O.F., that 100,000 dollars of state funds had been earmarked for special innovative educational projects designed to enhance the success of E.O.F. students in New Jersey colleges and universities. The only stipulation listed in the notice was that proposals should contain programmatic aspects that differed from the usual E.O.F. supportive services. Ms. Ruth Dixon, Chairman of the Academic Foundations Department, believed that the grant competition provided a unique opportunity for developing an innovative program at CCAS to focus on the

teaching-learning relationship. She asked Ms. Miriam Chaplin, Language Arts Coordinator, to write a suitable proposal. Ms. Chaplin finished the document in time to meet the February 8, 1974, deadline.

The proposal included a rationale, a summary of program objectives and activities, a timetable, and an estimated budget. Perhaps the best way to indicate the proposal's essential points is to quote from its content:

> Traditionally, instruction at the college level has been geared to a homogeneous population. The students were, for the most part, high achievers whose potential for academic success determined their admission. They were highly motivated with clearly defined goals . . . Today, the student population in most institutions is heterogeneous. Students are admitted with varying degrees of ability and in some instances, lives of poverty and despair have prevented the formulation of well defined goals . . .
>
> If these students are to succeed, a great deal of attention must be given to the instructional methods used in the classroom. Instructors must be willing to devote more of their time to insuring that students completely understand what they read and hear . . . New approaches in teaching and learning are needed.
>
> These new modes need not involve dramatic departures from the traditional educational framework or from accepted educational goals, but they must be learner directed and learner centered . . .
>
> Therefore, this proposal calls for a consortium in the teaching of language skills to be initiated by the Academic Foundations Department at Camden . . . The program will include alternative approaches to instruction which can be used in all subject areas. The core of the program will be a cooperative effort of faculty in Academic Foundations, academic faculty, students and community representatives.

On April 9, 1974, Dr. Edward J. Bloustein, President of Rutgers University, was informed that the E.O.F Board of Directors had approved the proposal submited by Academic Foundations. He, in turn, forwarded this information to appropriate officers at CCAS. The E.O.F. Board attached two special conditions to their grant authorization, i.e., (1) the program's financial support would last for one year (July 1, 1974 to June 30, 1975), and (2) no expenditures for capital equipment or travel would be allowed.

Ms. Miriam Chaplin accepted responsibility as coordinator for the program, which she had named the Educational Consortium in Instruction, a position added to her regular instructional and administrative posts. In May, 1974, Ms. Chaplin met with Dr. Walter Gordon, Dean of CCAS, to formulate plans for implementing the proposal guidelines. With Dean Gordon's consent, it was decided to establish a community-faculty Ad Hoc Committee of the Educational Consortium which would serve as the initial planning group. Committee members would determine the number of faculty participants needed, the minimum time to be devoted to the project, and the qualifications for two full-time staff personnel—a researcher and a secretary. Ms. Chaplin informally contacted several people that she thought would be receptive to this important task, and fourteen were chosen by mid-June (the Ad Hoc Committee will be described in section IV).

Thus, the Educational Consortium was presumably ready for operation on the scheduled starting date: July 1, 1974. However, an unforseen delay was caused by difficulties in obtaining the two full-time staff personnel. No Rutgers budgetary line existed for the position of program researcher and several weeks were spent in trying to create one. The program coordinator conducted meetings with University administrators to solve this unexpectedly complex problem. Finally, all parties decided that it would be easier to utilize an existing budgetary line by having the reseacher occupy faculty status. But further delay was caused by the University requirement that all positions must be advertised within the

Rutgers community for three weeks before outside candidates could be solicited. (No Rutgers personnel did apply). There was also a prolonged impasse in the matter of finding a program secretary. Originally, the position had been designated as "clerk-stenographer" but was reduced to "clerk" because of budgetary limitations. The lower salary attracted few satisfactory applicants. For the above-stated reasons, no full-time staff members were hired until October 1, 1974, which produced a delay of three months in implementing the program.

III. *Objectives of the Educational Consortium.*

In most cases, the overall goal of an educational program can be attained by many different objectives. The task facing program officers is to choose alternative objectives that seem best able to generate the kind of results called for, and then narrow those alternatives to a feasible number. Initially-derived objectives can be obtained from the current "state of the art" as disclosed in the educational literature, or program officials may utilize their own experiences to arrive at alternatives. Any number of possible objectives may be listed, as long as there is enough information to make each one clear and unambiguous. Next, each alternative must be analyzed for the length of implementation time, the cost of necessary resources, and potential acceptance by institution members. Program objectives might be further reduced by examining those included in similar projects that have been tried elsewhere.

The coordinator for the Educational Consortium in Instruction originally listed ten objectives that she thought the program should pursue. These were derived from her own teaching experience and knowledge of educational innovations. They are summarized below:

(1). *Objective*: Convene workshops and seminars.
Implementation: Encourage faculty and students to participate in a series of workshops led by experts in the field of education; hold informal seminars where students and instructors can discuss teaching-learning matters that are of mutual interest.
Outcome: Members of the college community will understand the need for a dialogue on teaching; a communication flow between students and instructors will be created.

(2). *Objective*: Establish a learning resource center.
Implementation: Develop a facility with multi-media materials, research literature on learning theory and instructional methods, and journals that deal with educational practices; provide experimental instruction in basic academic skills.
Outcome: Center will serve as hub of instructional activity on campus; it will increase awareness among faculty and students of creative teaching methods applicable to higher education.

(3). *Objective*: Promote innovative teaching methods.
Implementation: Involve individual faculty members in devising and evaluating innovative approaches to teaching, e.g., independent study, computer-assisted instruction, team teaching, role-playing, panel techniques, simulation—gaming, etc.
Outcome: New creative approaches to the teaching process will help satisfy the learning requirements of traditional and non-traditional students alike.

(4). *Objective*: Devise system of rewarding faculty participants.
Implementation: Establish guidelines for faculty participation including minimum number of hours to be devoted to project; list the long-range advantages to

improvement of instruction as a result of participation; confer with the Dean and the Appointments and Promotions Committee on these matters.

Outcome: A means will be provided whereby those faculty members who are interested in improving instruction will be rewarded; this may encourage other faculty to participate.

(5). *Objective*: Write list of student competencies (skills).

Implementation: Define competencies which all students should possess in order to succeed in college; solicit inputs by circulating a questionnaire to students on which they will be asked to list skills that they find are needed in academic courses.

Outcome: List of competencies will be distributed to all faculty who may adjust their instructional methods to reflect the attainment of these competencies.

(6). *Objective*: Write a skills' program.

Implementation: Use competency list as goals of the program; write practice exercises in language and study skills based on subject matter in major college disciplines; include only exercises which have been used successfully with students.

Outcome: A skills program will have been produced which reflects the input of academic instructors as well as language arts personnel.

(7). *Objective*: Write a teachers' guide to skill instruction.

Implementation: Identify the role of the content instructor in teaching language skills; list specific methods that can be utilized in college courses to help teach skills.

Outcome: College instructors will have a guide to which they can refer in planning their courses.

(8). *Objective*: Construct a standardized test.

Implementation: Review standardized tests currently being used in high schools and colleges in this geographic area; experiment with new test material; construct a test which evaluates those skills in the competency list with relative materials.

Outcome: A standardized diagnostic tool will have been constructed which is unique to CCAS; it may be applied at other institutions with similar populations.

(9). *Objective*: Devise a system of reporting to students.

Implementation: Develop forms which instructors can use to report to students concerning their need for reading instruction, research and study skill improvement, more coherent writing, oral language development, etc.

Outcome: Students will be made aware of their weaknesses in time to work toward correction; instructors will become more aware of student needs.

(10). *Objective*: Consult community educational leaders.

Implementation: Involve community educators in the project by soliciting their opinions on special problems of students entering college and encourage suggestions for improving high school and junior college curricula so that entering students will be better prepared.

Outcome: A positive relationship will be formed between educational institutions; this kind of relationship is invaluable as it pertains to students' needs.

Although all of the aforementioned alternatives were considered desirable as objectives for the Educational Consortium, it soon became apparent that only a few could be retained. The three-month delay in starting the program made objectives (5), (6), (7), (8), and

(9) extremely difficult to explore, since they required considerable time for preparation and development. Furthermore, faculty members expressed little interest in serving on committees that were proposed to do the actual writing of the competencies' list, skills' program, teachers' guide, standardized test, and performance reporting form (see section V for further explanation). Objective (4), devising a system to reward faculty participants, was rejected because of the lack of evidence concerning instructional improvement. Such evidence could be amassed and delivered to academic officials only after the project had operated for at least a year. Thus, all six objectives were deferred until time, resources and the social context were more conducive to their attainment.

The ten original objectives were now reduced to only four: (1), (2), (3), and (10). Objective (1), convening workshops and seminars, was considered essential if faculty members were to be made aware of the need for instructional innovation. This objective would be successfully met if six workshops were held over the academic year (with topics chosen by the program coordinator), attended by 15-20 persons per session, characterized by reasonable audience participation, and supplemented by two or three informal seminars. Objective (2), establishing a learning resource center, would be met if existing laboratory facilities were doubled to meet increased user demand. Objective (3), promoting innovative teaching methods, required the involvement of 6-10 CCAS faculty members in devising and evaluating teaching techniques that were relatively new to the college. This third objective was deemed the heart of the program, as teaching-learning innovation could be induced directly. Objective (10) was also retained, though there was some doubt that the limited time available would permit full achievement. For that reason, a very modest success criterion was proposed: to have several community educators give one workshop on student learning problems or some related matter.

IV. *Resources of the Educational Consortium*

The first major resource of any educational program consists of monetary funds that are necessary to pay personnel wages, equipment, office supplies, and other program items. As was indicated in section II, the Educational Consortium in Instruction received its financial support from the Educational Opportunity Fund. E.O.F. granted the Consortium 19,001 dollars for personnel wages and consultant fees, plus 1,935 dollars for administrative services; thus, total E.O.F. funds amounted to 20,936 dollars. (A full itemization of budgetary costs is contained in Appendix B). Rutgers University supplied program personnel with further wages and fringe benefits that cost 5,207 dollars. In addition, Rutgers made available approximately 8,000 dollars from a special fund reserved for aid to disadvantaged students. The latter source was used to purchase educational materials for the learning resource center.

Personnel—full-time, part-time, professional, and non-professional—constituted the second major resource of the Educational Consortium. The program *coordinator,* Ms. Miriam Chaplin, acted as chief officer of the Consortium. It was she who conceived of the project and framed its objectives. She was also responsible for serving as liaison with administrative officials, supervising a program staff, publicizing the work of the Consortium, coordinating the activities of all participants, selecting workshop topics and lectures, overseeing development of the learning resource center, and other pertinent duties. Ms. Chaplin's regular responsibilities as a reading instructor and administrator in the Academic Foundations Department made it impossible for her to devote full-time work to the Consortium. But she was able to choose the members of an Ad Hoc Committee who provided assistance in the initial planning stage.

The following types of individuals were asked to serve on the Ad Hoc Committee: (1) faculty actively engaged in the teaching process; (2) administrators responsible for

supervision and implementation of educational programs; (3) counselors trained in the techniques of interpersonal relations and sensitive to student needs; (4) community representatives interested in student success and the development of relevant educational programs; (5) CCAS students willing to donate their efforts to the program. This "mix" of committee members was intended to represent the ideas and expertise of those aware of the problems students face in college. With the above qualifications in mind, Ms. Chaplin contacted 15-20 people who had been suggested by the Academic Foundations' Chairman and the Dean. Informal discussions and meetings resulted in a commitment of service by these individuals:

Rev. Sam Appel (Officer, Camden City School System), Ms. Sarah Banks (Vice-Chairman, Academic Foundations Department), Dr. Alice Boehret (Chairman, Nursing Department), Ms. Gertrude Century (Counselor, Dean of Students Office), Mr. Donald Cotugno (Officer, Camden City School System), Ms. Ruth Dixon (Chairman, Academic Foundations Department), Ms. Margaret Hoppe (Instructor, Academic Foundations Department), Dr. Claire Jacobs (Associate Professor, Mathematics Department), Mr. James Rothchild (Assistant Professor, Mathematics Department), Dr. Edward Schmitt (Assistant Professor, Business and Economics Department), Dr. Robert Smith (Associate Dean), Ms. Barbara Thomas (Student), Dr. Jon Van Til (Chairman, Urban Studies Department), Ms. Cynthia West (Counselor, Acadamic Foundations Department).

One of the Committee's most important contributions was to determine job qualifications for the program researcher and secretary. It was decided that the researcher should be experienced in higher education research and possess at least a Master's degree in a relevant field. The researcher would be required to compile data on the project, help participants locate critical information, and present a final evaluation report including a documented model for duplication. Dr. Frank Fratoe, a sociologist whose work has dealt with academic policy changes, was chosen for this position. Dr. Fratoe obtained his doctorate from the University of Pennsylvania where he also served as a teaching fellow and research assistant. The Ad Hoc Committee decided, furthermore, that the program secretary should possess a high school diploma with appropriate training in clerical and typing skills. The person filling this post would be responsible for communications and general office work. Ms. Evelyn Crawford, a former legal secretary who had also performed secretarial work at a community college, was selected for the position. Both Dr. Fratoe and Ms. Crawford were engaged as full-time program personnel.

The third major resource of the Consortium consisted of material facilities which were utilized by parties involved in the project. The Academic Foundations Department furnished office space for the program researcher and secretary. Department equipment, such as a xerox copying machine, file cabinets, typewriters, etc., were made available. The learning resource center became a meeting place for those who attended seminars; this facility, too, was offered by Academic Foundations. The Rutgers-Camden Law School and the campus library both generously provided conference rooms where workshops were held. Educational materials for the learning resource center and office supplies were purchased as needed from Consortium funds.

V. *Activities of the Educational Consortium*

Some of the preliminary activities undertaken by the Educational Consortium have been mentioned in previous sections. The Ad Hoc Committee met occasionally during the Summer and Fall of 1974 to help organize the program's early stages and advance suggestions on future developments. It also interviewed two candidates for the position of program researcher. After some deliberation, the second candidate (Dr. Fratoe) was selected. The project coordinator interviewed several applicants who sought the secretarial

position and made a final choice (Ms. Crawford). The coordinator also circulated to all CCAS faculty a lengthy message which explained the Consortium's objectives. The message requested faculty fembers to indicate whether they were willing to serve on committees that would actually produce the competencies' list, skills' program, teachers' guide to skill instruction, standardized test, and performance reporting form. Unfortunately, only one faculty member expressed a desire to do committee work. Subsequent attempts to generate more interest in the committee approach were also unsuccessful. However, several faculty did give positive response to other features of the program and later contributed their efforts to the Consortium activities described below.

(1). *Workshops and Seminars.* Six workshops and two seminars were held during the 1974-75 academic year. The coordinator, Ms. Chaplin, sent notices before every workshop to all members of CCAS and selected community representatives inviting them to attend the sessions. She also had posters printed which announced each workshop and displayed them at various campus locations. Topics for workshops, as well as guest lectures, were picked by Ms. Chaplin on the basis of her experience with non-traditional students and her professional discernment. She informally asked certain faculty and students to gather for seminars where participants could discuss subjects of their own choice. In every case, the program researcher was present to monitor the speakers and audience response. Summary descriptions of these workshops and seminars have been derived from his notes.

Workshop #1 (*October* 14, 1974). Approximately 125 people assembled in the moot courtroom of the Rutgers-Camden Law School to hear three university presidents discuss "The Role of the Urban University in the Decade of the Seventies." Presidents Edward Bloustein of Rutgers University, William Hagerty of Drexel University, and Marvin Wachman of Temple University were particularly qualified to survey this subject since their institutions are located in urban areas. All three panelists agreed that universities have a key role to play in satisfying the needs of American city dwellers. Dr. Bloustein tempered his optimism on this point by saying that in the 1960's universities oversold their ability to solve urban problems and thereby created false expectations with ensuing disappointments. However, he did cite recent progress made by urban universities in fashioning new programs such as urban studies, black and ethnic studies, extension programs in education, minority business, legal aid, etc. Dr. Hagerty talked about the role of technological universities like Drexel that must teach students how to develop and apply technology to ease the tensions caused when people live closely together. Dr. Wachman believed that urban universities must serve a catalytic function by bringing together people of different racial and ethnic backgrounds. He supported the continued recruitment of disadvantaged minority students. The workshop was also marked by a peaceful demonstration which underscored one problem inherent in the university-city relationship; residents of the Cooper-Grant Community expressed their opposition to the expansion of Rutgers-Camden into their neighborhood. Questions addressed by audience members, including demonstrators, concerned specific policies undertaken by the three presidents' institutions in recruiting non-traditional students, obtaining land by expansion, and other matters.

Seminar #1 (*October* 22, 1974). Seventeen participants joined in a seminar held at the learning resource center. The discussion was begun by Ms. Chaplin who briefly summarized the background and objectives of the Educational Consortium. Dr. Fratoe talked about the need for innovative teaching methods at CCAS and gave a few examples of new techniques that might be applied. He also distributed to those present a lengthy bibliography on college teaching which was intended to be a reference source on the subject. Faculty members asked questions and offered comments about these maters. The point was made that Rutgers-Camden is more of a teaching institution than, say, Harvard or Wisconsin where research is so heavily emphasized; therefore, recognition and support

should be given here for special instructional problems faced by teachers. Several questions were asked about competency-based education—its rationale, procedure, and possible utilization at CCAS. Since none of the discussants were familiar with this new instructional tool, the program coordinator and researcher promised to look further into competency-based plans. It was suggested that a later workshop might be devoted to the subject.

Workshop #2 (*November* 14, 1974). About thirty people attended a lecture given in the campus library by Dr. Janet Emig, Professor in the Rutgers Graduate School of Education (New Brunswick). Dr. Emig's topic was "The Search for Maturity: The Language Development of College Students." She began her talk by pointing out that the problem of language development is not confined to the earlier periods of life but is a characteristic of later years as well. Entering college students, for example, have not mastered all language tasks. Studies have shown that many American college freshmen have not reached the formal proposition stage and, therefore, are unable to form abstractions or generalizations. Yet instructors make assignments based on the belief that their students have reached this stage. What can be done to overcome the problem? Dr. Emig suggested that college students must proceed in language development by learning (1) how to talk, (2) how to write, (3) how to master the specific languages of disciplines. These are all active or productive functions as opposed to the passive functions of reading and listening. Learning how to talk is a creative and thoughtful process involving the formation, refinement, and verification of hypotheses. Writing should be learned, not as an end in itself, but as a means for understanding other disciplines. To facilitate this latter purpose, students ought to be well versed in the lexicons or unique languages of each discipline. Dr. Emig proposed that some kind of status study should be made in order to discover what students need to know about language to study biology, philosophy, sociology, etc. She also said that shared criteria across disciplines might be helpful, e.g., what are the elements of an organized report for all fields? Finally, Dr. Emig advanced the opinion that freshmen should commit half of their time to various language activities such as talking, role-playing, chamber-theater, and mime.

At her suggestion, the workshop audience then divided into small discussion groups to formulate a language development policy across disciplines. The recommendations gleaned from these lively groups were later reported to the entire workshop.

Seminar #2 (*November* 19, 1974). Fourteen CCAS faculty and community educators met for a second seminar in the learning resource center. Ms. Chaplin reviewed the two workshops already given and asked for suggestions on topics that could be covered in future sessions. One person believed that a uniform program for the rest of the year should be developed by having the final three workshops encompass the same subject. However, a general consensus prevailed which supported the use of different themes, a plan more in keeping with the Consortium's diverse and exploratory nature One representative from the Camden City School System suggested that it might be fruitful for local school personnel to share what they have learned about teaching with CCAS instructors This was an especially intriguing idea because, as he indicated, some Camden elementary and secondary teachers had recently been trained by competency-based techniques. Other matters brought up concerned the development of computer-assisted tutorial instruction (newly initiated at CCAS), the need for on-going communication between Consortium participants and the general faculty, questions about what should be done when the Consortium finished operation, and a preview of the next workshop.

Workshop #3 (*December* 12, 1974). Approximately 35 people attended a workshop on "The Measurement and Grading of Classroom Learning" given by Dr. Douglas Penfield, Associate Professor in the Rutgers Graduate School of Education (New Bruns-

wick). After a short synopsis of the history of educational testing, Dr. Penfield invited the audience to respond to some basic questions that he thought instructors should ask about their test methods. This format created considerable interest, as gauged by the frequency of audience response and interaction. A sample of the key questions with corresponding answers will be given below, although it cannot fully portray the spirited exchange of opinions.

Q. What is the function of testing?

A. Tests measure how well students have attained some pre-determined set of objectives (particularly suited for classroom or extra-classroom projects).

A. Tests measure the competency of students as indicated by (1) mastery of course material and/or (2) what each student taught the instructor.

A. (Dr. Penfield) Tests are given to discover the extent of student knowledge, to give teachers feedback of information concerning whether course material has been comprehended, to give students feedback on teacher perceptions, and to motivate test-takers

A. Tests are used as "eliminators" to reduce the pool of students as they advance through the educational hierarchy; this function may exist for intellectual reasons, but can have economic and political consequences as well.

Q. Do tests really motivate students?

A. Students are very test conscious and often ask if course material will be used for exam construction; presumably they study this material harder since grades may depend upon it.

A. It is true that tests are a motivating force for some students, but for others tests play a restrictive role because the anxiety they cause may reduce comprehension or because their time limitations may prevent the student from demonstrating his/her actual comprehension.

Q. What are the weaknesses of tests?

A. Tests usually measure cognitive rather than affective knowledge, and the latter is certainly an important part of the educational process.

A. Students are exposed to far more tests than are necessary; Americans are an over-tested people.

A. Teachers too often use the exam as a devise for computing grades when they could use it to obtain valuable information on students to help them.

A. One assumes that curriculum content determines test structure, but tests may determine curriculum, especially when they are the standardized type; this can produce undesirable results like course inflexibility and intellectual passivity.

Q. How can the validity of tests be measured?

A. (Dr. Penfield) It is necessary to discover if test items differentiate between students who do very well and those who do very poorly. Use the following "rule of thumb": divide the class into high and low scores, count the number of people in each group who get a particular test item right, and subtract one total from another; if the subsequent percentage is greater than 15%, then the item is valid.

A. One can use the cross-reference or "panel of experts" technique for ascertaining whether a subjective exam is valid.

Workshop #4 (*February* 13, 1975). A lecture entitled "Humanizing Learning" was given by Dr. Albert I. Oliver, Professor—University of Pennsylvania, before 35 people in the library conference room. The issue to which Dr. Oliver addressed his remarks was

whether students learn better in a humanizing or a de-humanizing situation. His answer was that a humanizing environment, where students become more interested in knowledge as they preceive it to affect them personally, has the greatest positive impact. They learn best in this context. According to Dr. Oliver, a humanizing curriculum would incorporate a program of studies emphasizing the students' cultural heritage, a program of experience centering on action learning (e.g., involvement in the community), and a program of supportive services with guidance, media, and health specialists who would each contribute to the whole life of the young person. Interpersonal relationships, Dr. Oliver argued, are essential to humanizing education and these must be encouraged both administratively and pedagogically by setting up an institution with teaching-learning procedures that stress the interpersonal quest for knowledge. Teachers must promote divergent thinking as opposed to discouraging it, that is, let students know there are many different ways to do something, not just one way. After the foregoing comments, Dr. Oliver asked the workshop audience to separate into small groups where they discussed how to "de-humanize a school," an interpersonal lesson in what education should *not* be. Information sheets that dealt with the lecture's subject were also circulated; one of them, listing certain assumptions in humanizing learning, is quoted in full below:

Assumptions Underlying "Humanizing Teacher Education" based upon an article by Dr. Richard Blume, Elementary Education, University of Florida, *Phi Delta Kappan* 52:411-415, March 1971

1. People do only what they would rather do.
2. Learning has two aspects: 1) acquiring new information, and 2) discovering the personal meaning of that information.
3. It is more appropriate for people to learn a few concepts rather than many facts.
4. Learning is much more efficient if the learner first feels a need to know that which is to be learned.
5. People learn more easily and rapidly if they help make the important decisions about their learning.
6. People learn to grow more quickly if they aren't afraid to make mistakes. They can be creative only if they can risk making errors.
7. We want students not only to know about cold, hard facts, but to have some "hot feelings about hard facts."
8. Pressure on students produces negative behaviors, such as cheating, avoidance, fearfulness, and psychosomatic illness.
9. Our teachers would be more effective if they were self-actualizers. Teachers ideally should be more healthy than "normal" people. They should be creative, self-motivated, well-liked persons.
10. The most important perceptions an individual has are those he has about himself. The self-concept is the most important single influence affecting an individual's behavior.
11. All individuals have a basic need for personal adequacy. We all behave in ways which will, according to our view of the situation, lead to our self-enhancement.
12. Teaching is a helping relationship rather than a command relationship. It is similar to counseling, psychotherapy, nursing, human relations work, social work, and many other helping professions.
13. We must make provisions for people to go through our program at different rates.

Workshop #5 (February 25, 1975). The topic of this workshop, "Competency-Based Education," will be examined in a later sub-section.

Workshop #6 (March 6, 1975). Fifteen people gathered in the library conference room to hear Dr. Ben A. Green, staff member of the Center for Personalized Instruction (Georgetown University), narrate "Personalized Instruction in Higher Education." Dr. Green first showed a brief film which described the origins, work, and staff of the Center for Personalized Instruction, with reactions by Georgetown students who were exposed to personalized methods and further comments by interested faculty. The film disclosed that the personalized system of instruction (PSI) involves teaching courses as if each student were a class of one. This is accomplished by dividing a course into learning units for which the instructor writes concise guides together with two or three mastery tests. Then, undergraduate volunteers (called proctors or tutors) are recruited to administer the tests whenever the students want them and to help answer questions on course material. As the film's real-life "actors" made clear, PSI has one paramount advantage: it lets each student work at his own pace. After the film, Dr. Green asked for questions from the audience. His answers, which are summarized here, gave further insights into the personalized learning mode.

Q. What is the meaning of an "A" grade in a PSI course?

A. "A" grades earned by PSI students are at the same achievement level as "A" grades earned by students in previous traditional courses; obviously, PSI students who do not pass all units would get less than an "A".

Q. Is there more competition in the PSI learning system?

A. There is actually more cooperation than competition among students; the only competition that takes place lies in seeing who can finish the course first.

Q. Is any provision made for review of course material?

A. Review units can be built into a PSI course and a final examination covering all work is mandatory.

Q. How much teacher preparation time is required for constructing a PSI course?

A. A minimum of two weeks is needed, but the average time is closer to one month (8 hours per day).

Q. How are proctors selected?

A. Proctors are chosen from undergraduates who have taken the course during the previous year; they are rewarded not with money but in academic credit units.

Q. What type of student benefits the most from PSI?

A. PSI is good for the student of low ability because he/she is forced to study each unit carefully; it is also good for the student of high ability because he/she can complete the course quickly.

Q. Have follow-up studies been conducted on the later academic achievements of PSI students?

A. A number of studies have been made which show that PSI students have done better than non-PSI students in advanced courses; but there is some contradictory evidence.

Q. What courses do not fit well into the PSI mode?

A. Courses that encourage group learning or differentiate student abilities should not be taught by PSI methods.

In summary, Dr. Green listed five elements of a personalized system of instruction: mastery—students continue only when they have fully mastered a unit of knowledge; self-

paced—students proceed as fast as they wish; lectures—classroom lectures by the instructor are used only for motivational reasons, not to transmit basic knowledge; written communication—this is dispatched both ways between students and teacher; proctors—undergraduates administer exams and discuss subject mater with students.

(2). *Learning Resource Center.* The Learning Resource Center occupies two rooms, no. 207 and no. 208, in Armitage Hall. Academic Foundations' personnel maintain the Center for use by E.O.F. students, but its facilities are also open to the entire CCAS student body. Ms. Miriam Chaplin is supervisor of the center and she, along with her language arts' colleagues, Ms. Margaret Hoppe and Mr. Ruben Perina, have taught reading classes there. Since February 1, 1975, a graduate assistant has been available at the center to help students individually in improving their reading skills; she is Ms. Roberta Reith, a doctoral candidate at Temple University. According to data compiled by Ms. Reith, twelve students who worked primarily on reading rate improvement spent 93 hours at the center during the Spring, 1975 semester. Eighteen students from Mr. Perina's classes used it on a part-time basis during their regularly scheduled periods; they averaged three hours each. Approximately 10-15 students used it to complete work for their reading classes or for individual conferences on study skill problems, etc.; they averaged 1-3 hours each.

The Learning Resource Center, as indicated by the accompanying table, has greatly augmented its material equipment in the past year. All categories of material—workbooks, learning kits, cassettes-tapes-films, and hardware—have more than doubled in quantity. The most notable additions have been 6 controlled-reading machines (each placed in its own study carrel), three cassette players, and one tachistoscope. Learning kits now include: "Specific Skills Series Multi-Level Set," "Columbia University Study Program in Rapid Reading," "Target Orange Vocabulary Development Kit," and "The Reading Line Lab." Many of the workbooks and filmstrips are geared for use with the controlled-readers which are designed to aid the student increase her/his reading rate and comprehension.

Materials in the Learning Resource Center

TYPE	SPRING, 1974	SPRING, 1975
Workbooks (n)	604	1746
Kits (n)	2	4
Cassettes-Tapes-Filmstrips (n)	0	14
Hardware (n)	5	34

A small library containing references on teaching-learning matters has been developed. It is comprised of 107 pamphlets and 14 books obtained from various educational research agencies. These references may be examined at the Center by CCAS faculty or students whenever they wish. Several journals are also received, e.g., *Audiovisual Instruction, Change, Simulation and Games, Improving College and University Teaching, Journal of Experimental Education.* A sample list of the Center's books on teaching-learning phenomena is presented below:

Brown, James W. and Thornton, James W.
College Teaching: A Systematic Approach.
New York: McGraw-Hill, 1971.

Buhl, Lance C. and Lane, Sam H. (eds.)
Innovative Teaching: Issues, Strategies, and Evaluation. Cleveland: Center for Effective Learning, Cleveland State Univ., 1973.

Chesler, Mark and Fox, Robert
Role-playing Methods in the Classroom.
Chicago: Science Research Associates, 1966.

Eriksen, Stanford C.
Motivation for Learning.
Ann Arbor: University of Michigan Press, 1974.

Jekel, Jerome R. and Johnson, Robert E.
Alternatives in Education-54 Approaches.
Bismarck, N.D.: St. Alexius Printshop, 1973.

Mathis, B. Claude and McGaghie, William C.
Profiles in College Teaching: Models at Northwestern. Evanston: Center for the Teaching Professions, Northwestern Univ., 1972.

Mathis, B. Claude and Holbrook, Steven T.
Teaching: A Force for Change in Higher Education.
Evanston: Center for the Teaching Professions, Northwestern Univ., 1972.

Milton, Ohmer.
Alternatives to the Traditional.
San Francisco: Jossey-Bass, 1973.

Stiles, Lindley J.
Theories for Teaching. New York: Dodd, Mead and Co., 1974.

Zuckerman, David W. and Horn, Robert E.
The Guide to Simulations/Games for Education and Training. Lexington, Mass.: Information Resources, 1973.

(3). *Innovative Teaching Projects.* Every effort was made by Consortium staff members to encourage the CCAS faculty to undertake innovative teaching experiments. Ms. Chaplin and Dr. Fratoe informally contacted 25-30 instructors to ask whether they would care to participate in this endeavor. Additionally, Dr. Fratoe circulated campus-wide "memos" which described the Consortium's work and invited faculty to consider alternative instructional methods for reaching non-traditional students. To that end, memo no. 2 (See Appendix C) enumerated some examples of recently applied teaching procedures as well as new institutional arrangements that have been applied to the teaching-learning relationship. Consortium personnel offered full cooperation in devising instructional and evaluational techniques, but each participating faculty member was urged to develop an individual strategy. The rest of this sub-section will be devoted to expository analyses of three innovative projects conducted during the 1974-75 academic year.

Project #1. The first teaching experiment was carried out by Mr. Michael Lang in a course entitled "Power and Decision-Making in Urban Communities" (Urban Studies 104, Fall, 1974). Two regular class periods of the course were assigned to playing a simulation game, "Urban Dynamics." Mr. Eric Clark of Glassboro State College explained and directed the game. As Mr. Clark noted before the first session, "Urban Dynamics" demonstrated how economic, political, and social factors combine historically to shape the pattern of a metropolitan area. The game simulated events that took place in American cities from 1920 to the present time. Mr. Clark began by dividing the players into four teams, each team representing a distinct social class with unequal resources, i.e, population, capital, land, education, etc. These resources were symbolized by wooden pieces on a game board and by simulation money distributed to each team. The players strove to maximize their resources according to pre-established rules, read by Mr. Clark as the game progressed, and additional rules developed in a "city council." Teams bargained with each other, formed coalitions and sometimes competed fiercely over such matters as: access to college; building of factories and corporations; employment; rent collection; city tax rates; level of welfare; and mayoral elections. This last item featured

campaign speeches and vote trading much like those encountered in real life. Indeed, the students pursued power and money in a way that evidenced their complete immersion in the game's seeming reality. They even displayed the same confusion as their authentic counterparts in trying to solve the dual problem of declining municipal revenues (as business fled to the suburbs) and increasing services (as the poor were left behind). Player reactions like these were recorded by Dr. Fratoe, who acted as observer. Mr. Clark and Mr. Lang gave advice and clarified procedural points when necessary.

Mr. Lang later asked his students to evaluate in writing the simulation game experience and state how it related or failed to relate to course subject matter. Student opinion was generally favorable, as will be seen shortly. However, since the question was included as part of a final exam, it is possible that students were more inclined to praise the experiment in hopes of obtaining a better grade But revealing written comments and enthusiastic game participation both indicate that the students were genuinely impressed with this new teaching tool. Content analysis was applied to the subjective essay answers in order to produce quantitative data. Statements suggesting positive evaluation were coded and entered under four categories; the same was done for negative evaluation. Results of the content analysis (see accompanying table) show that 17 out of 20 students gave more positive than negative responses.

STUDENT EVALUATION OF "URBAN DYNAMICS" SIMULATION
GAME USED IN URBAN STUDIES 104, FALL, 1974

	POSITIVE EVALUATION				NEGATIVE EVALUATION			
STUDENT	GAME RELATES TO COURSE	GAME STIMULATES CLASSROOM INTER-ACTION	GAME PROMOTES FEELING OF INVOLVEMENT	GAME PORTRAYS REALISTIC PROCESSES	GAME DOES NOT RELATE TO COURSE	GAME DOES NOT STIMULATE CLASSROOM INTER-ACTION	GAME DOES NOT PROMOTE FEELING OF INVOLVEMENT	GAME DOES NOT PORTRAY REALISTIC PROCESSES
1	4	0	0	4	0	0	0	1
2	1	0	2	6	2	0	0	0
3	3	0	1	2	0	0	0	0
4	3	0	0	2	0	0	0	0
5	2	0	0	0	0	0	0	2
6	1	0	0	1	0	0	0	0
7	1	0	0	1	0	0	0	0
8	3	0	0	1	0	0	0	0
9	1	2	0	0	0	0	0	4
10	2	1	3	2	0	0	0	0
11	2	0	0	2	0	0	0	0
12	1	0	1	1	0	0	0	0
13	4	0	0	1	0	0	0	0
14	2	1	2	4	0	0	0	0
15	3	1	1	0	0	0	0	1
16	3	0	0	1	0	0	0	4
17	2	0	0	0	0	0	0	0
18	4	1	1	2	0	0	0	1
19	1	0	2	2	0	0	0	0
20	1	0	0	1	0	0	0	0
TOTAL	44	6	13	33	2	0	0	13

TOTAL NO. OF STUDENTS WITH MORE POSITIVE THAN NEGATIVE RESPONSES—17

TOTAL NO. OF POSITIVE RESPONSES—96

TOTAL NO. OF STUDENTS WITH MORE (OR EQUAL NO. OF) NEGATIVE THAN POSITIVE RESPONSES—3

TOTAL NO. OF NEGATIVE RESPONSES—15

Typical positive comments noted how the game helped to crystallize the problems of governing a city, illustrated the lack of trust among groups struggling for power, showed that minorities had to curry the favor of more powerful groups to obtain advantages, gave people playing the game a feeling of what it is like to be part of the decision-making process in a city, promoted interaction between students who seemed closer and more willing to speak in class, and served as a miniature representation of the course by showing how power affects urban political decisions. Typical negative comments mentioned that the game did not deal with municipal bureaucracies, failed to address the problem of fragmented local government, downplayed the mayor's role, omitted the struggles for power within each group, said nothing about how cities might be restored, contained arbitrary rules which frustrated players decisions, did not provide enough time for students to become familiar with game procedures, and was not as realistic as it could have been.

Project #2. The second innovative teaching project was conducted by Ms. Margaret Hoppe in a "Reading Improvement" course (Reading 114, Spring, 1975). Ms. Hoppe used a quasi-experimental design to compare the learning effectiveness of teacher-directed and student-directed instructional methods in reading. Her class was divided into two sections, with the first (control group) taught by standard lecture methods that stressed complete teacher guidance, while the second (experimental group) featured considerable student self-guidance through small group discussion of concepts and exercises. Unfortunately, registration requirements made it impossible to place students randomly in each section or to match them on key factors. Thus, uncontrolled extraneous variables may have produced effects confounding those of the experimental variable. Any conclusions drawn in this situation must, of course, be highly tentative.

Course objectives included review of study skills and reading comprehension, as well as improvement in critical interpretation, speed development, and vocabulary. Adaptation of these objectives to the different learning environments of the two groups was not a small problem, as can be seen in the instructor's comments (Appendix D). Briefly, the instructor found it necessary to spend more time teaching study skills to both groups than she had originally anticipated. She discovered that several students in the experimental group were unmotivated to work individually and had to be given more teacher direction than she would have wished. However, concepts were elicited from this section whenever possible with only a few supplemental lectures. Members of the experimental section were generally unable to transfer their critical abilities to additional materials without the instructor's help; they also required more time for speed development than the teacher-directed pupils. For the foregoing reasons, Ms. Hoppe could not keep the experimental section totally student-directed, but she concluded that responses appeared favorable to the small group discussion method, particularly in analyzing and interpreting journal articles.

Both groups were given mini-exercises throughout the semester and teacher-made tests periodically which enabled the instructor to note where the re-teaching of topics might be helpful. Both received a standardized pre-and post-test (Form B of the McGraw Hill Basic Skills Test) to guage their comparative progress. Grades for the two sections were nearly equal on all teacher-made tests except for critical analysis. Mean scores on the standardized test imply that more learning progress took place in the experimental group (see accompanying tables). However, the differential between mean standard scores was not significant statistically. Even if significance had been found, one could not conclude that the student-directed method was more effective, since the presence of uncontrolled variables and the altered experimental procedures made the outcome

PRE-TEST AND POST-TEST SCORES ON FORM B OF THE McGRAW HILL BASIC SKILLS TEST

(SECTION 1, TEACHER-DIRECTED)

STUDENT	PRE-TEST STANDARD SCORE	POST-TEST STANDARD SCORE
1	51	53
2	38	41
3	39	45
4	38	32
5	60	57
6	35	38
7	59	64
8	37	49
9	32	34
10	44	37
11	43	43
12	39	41
13	41	40
MEAN	43	44

PRE-TEST AND POST-TEST SCORES ON FORM B OF THE McGRAW HILL BASIC SKILLS TEST

(SECTION 2, STUDENT-DIRECTED)

STUDENT	PRE-TEST STANDARD SCORE	POST-TEST STANDARD SCORE
1	39	47
2	28	34
3	39	43
4	40	51
5	35	44
6	38	33
7	43	48
8	24	23
9	42	46
10	47	57
11	26	43
12	42	55
MEAN	37	44

problematic. Further research would certainly be worthwhile to see if one instructional technique is clearly superior to the other or, as Ms. Hoppe suggested, if a combination of the two methods might be more viable.

Project #3. In April, 1975, a special one day "Study Skills Workshop" was held for women resuming their formal education after some intervening years of non-school pursuits. The session was intended to introduce the women to fundamental study skills needed for successful academic work. Ms. Gertrude Century, a member of the CCAS counseling staff, organized the workshop and later furnished this description of its proceedings:

> The workshop was held in a meeting room of the College Center. A circle of comfortable chairs was set up. Twelve students were present.
>
> The facilitator and presenters introduced themselves: Trudy Century, counseling staff; Jewel Berry, librarian; Anne Craig, English Department; and Peg Hoppe, Academic Foundations Department.
>
> Three mini-lessons were announced: *Using the Library*, Organizing a Paper, and Studying for Exams. Students were requested to select one of these three skills' areas to concentrate on during the workshop. They were asked to base their selection on need for development, i.e., to chose their weakest area.
>
> The group as a whole then divided into three small groups, and the mini-lessons proceeded for about thirty minutes. The larger group then reassembled and shared some of their learnings: The Exam Group reported that they had learned to "psych out" the instructor, or to organize their studying around those concepts that the instructor had indicated were important. The group that worked on organizing a paper learned that "it's easy if you use a scheme."
>
> The Library Group had learned a valuable lesson: not to be embarrassed to ask the reference staff for help, that using the library is more complex than simply looking for topics in the card catalog.
>
> . . . In general, the participants found the workshop to be productive and enjoyable. Several goals were realized: The students were introduced to the resources (staff and services) of the college which are available for study skills aid. The students learned that study techniques can be acquired—at any age. The embarrassment of seeking help with basic skills such as reading was overcome, as an atmosphere of trust was created in which people felt free to expose weakness. The process of skills development was begun in at least one area.

Participants in the workshop were enthusiastic but did express disappointment over certain program inadequacies. They recommend the following corrections for future workshops: (i) hold the workshop earlier in the school year; (ii) have separate sessions for each skills' area; (iii) devote at least one hour to each area; (iv) put greater emphasis on methods for note-taking and writing essay exams; (v) include mathematics as one of the skills' areas.

(+). *Information from Community Educators.* One of the Consortium's primary goals was to create a communication bridge between CCAS instructional personnel and local educators. It was hoped that this endeavor would produce insights into the unique educational needs of students entering CCAS, e.g., secondary-level staff could give information about pedagogical or curricular arrangements they had found effective and which, in turn, might be applied to the academic environment. As was noted earlier, the subject of "competency-based education (CBE)" was deliberated at early seminars; some local educators in attendance mentioned that they had recently been associated with a CBE pro-

gram for training Camden school teachers. Several consortium participants volunteered to serve on a committee whose responsibility involved finding a suitable way to explain the Camden CBE teacher-training program to CCAS faculty. The committee—composed of Ms. Gertrude Century, Ms. Margaret Hoppe, Dr. Jon Van Til, and Mr. Dominic Cotugno—met informally and decided to convene a single workshop on the topic.

On February 25, 1975, twelve people met in the Learning Resource Center to hear the CBE program discussed by Mr. Cotugno (Camden City School System), Mr. George Brent (Glassboro State College), and Mr. David Zimmerman (Glassboro State College). The latter two gentlemen had helped organize the teacher-training project at their institution. As they stated, the essential features of CBE are: defining what students must be able to do at the end of the program (objectives), demonstrating how they must do it (competencies), and indicating what subject matter must be learned (means). What is the system's peculiar advantage? According to panel members, it enables the student to understand what he should master at the beginning of a semester so that he can pace learning in accordance with his individual needs. Courses are divided into learning modules, each organized around a behavorial objective. Pre-tests are given to see if students need to take modular instruction or if they are sufficiently knowledgeable to skip it and go on to another unit. Those who do progress through the learning experiences of a module are tested again; students who score poorly on the post-test are given remedial educational activities. Modules do not have to be done in any particular sequence, but all must be finished within the program's two year time limit. How can overall program success be measured? As Mr. Cotungo explained, 33 out of 36 teachers trained under the program have been hired by the Camden School System and only one is having any difficulty in the classroom. These data imply that the success factor is, indeed, very high. Questions of clarification were addressed to the panel by an audience that was obviously most interested in the CBE method.

(5). *Other Activities.* Supplemental consortium activities were performed by Dr. Fratoe, the project researcher. He compiled a bibliography on innovative teaching-learning techniques which was distributed to CCAS faculty members. He also requested information on the same subject from twenty educational research agencies. Replies were sent by fourteen such agencies; the pamphlets, books, and reports they forwarded now constitute a large part of the mini-library on teaching-learning maters. One especially valuable set of papers specifying a competency-based nursing curriculum developed by the Five School Consortium Project (Memphis, Tennessee) was given to Dr. Alice Boehret, Chairman of the Rutgers-Camden Nursing Department, for her inspection. Finally, Dr. Fratoe wrote a proposal for a new CCAS educational project to be undertaken during the 1975-76 academic year. This project would go beyond the Consortium's "awareness stage" of teaching-learning innovation to a "development stage" intended to encourage large-scale faculty involvement in the design of learning. The contemplated project would fund and coordinate the work of three departments doing experiments on improving student learning processes. The proposal is presently being considered by the Fund for the Improvement of Postsecondary Education (DHEW).

VI. *Results and Evaluation*

General evaluation of the Education Consortium's work can be done only by evaluating the success in meeting each program objective. This latter judgment, on the other hand, is ascertained from the results of program activities measured against pre-determined performance criteria. (The type of evaluation referred to here is *summative,* i.e., applied at the program's termination.) Performance criteria for each activity were list-

ed earlier, but a short review of them now would certainly be useful. For the workshops and seminars, successful achievement was determined to consist of the convening of six workshops plus two or three seminars, attendance by 15-20 people at each session, and reasonably-interested audience response. Satisfactory development of the Learning Resource Center would be achieved when its material facilities were doubled, with additional user programs. And the final two performance criteira: innovative teaching experiments must be conducted by 6-10 CCAS faculty members; community educators must hold at least one workshop.

The data presented in section V show that virtually all criteria were met except for those pertaining to the teaching experiments. Attendance at the six Consortium workshops and two seminars (see accompanying table) was consistently high, and fell below—but not far below—the desired level only twice. One cannot estimate audience response without some subjective interpretation, yet the number of excellent questions and comments made at each discussion did give objective indication of strong audience concern.

ATTENDANCE AT EDUCATIONAL CONSORTIUM WORKSHOPS AND SEMINARS

	W-1	S-1	W-2	S-2	W-3	W-4	W-5	W-6
ATTENDANCE	125	17	22	14	35	35	15	12

Perhaps the real test of the sessions' effectiveness will come in future years when CCAS faculty do or do not apply the teaching-learning insights advanced at the workshops. All types of materials in the Learning Resource Center were at least doubled (see table in section V) and the addition of a part-time assistant made it possible to furnish new LRC reading and study skills' programs that previously were unavailable. Community educators did present one workshop on the subject of competency-based education, a novel instructional technique for possible adoption at CCAS. However, Consortium members were quite disappointed when lack of time and personnel precluded any further dialogue between local educators and the college.

The Consortium's greatest failure came in the area of innovative teaching. Only three CCAS faculty participated in the experiments, although one person was a double contributor. It should also be noted that a counselor and a librarian were co-participants in one project. Obviously, the absence of faculty cooperation was a key factor here. Discussions held between Consortium staff and individual faculty failed to gain anything but tentative commitments to do teaching innovations, only three of which were later performed. The delay in starting program activities may be one cause for the failure to attain this objective. By the time Consortium personnel began working on the matter, faculty members had already proceeded well into the school year with its heavy burdens of regular teaching and disciplinary research. More cooperation may have been obtained if faculty had been contacted sometime prior to their first class presentations. Perhaps the inability to reward experimenters with grant money or to secure recognition of their efforts by the Appointments and Promotions Committee also were factors. One would reasonably expect inducements beyond the intrinsic pleasure found in teaching to help motivate the innovative spirit. Lack of faculty cooperation, probably stemming from the same aforementioned reasons, also made it necessary to defer several other program objectives, e.g., compiling a student competencies' list, writing a teacher's guide to skill instruction, etc.

Thus, three out of the four major Consortium objectives were met successfully, one was not achieved, and several others were deferred. It is difficult to weigh the respective merits of each objective, since all were considered important in gaining the ultimate goal: improving the teaching-learning relationship at CCAS. Possibly, encouraging the faculty to conduct teaching innovations was the foremost objective, because it came nearest to generating substantive, classroom-derived changes in the teaching-learning mode. But one must remember that the Consortium was intended above all to inform the faculty of the need for substantive changes, not necessarily to produce them immediately. Holding workshops and seminars, developing the Learning Resource Center, consulting community educators, circulating memos, and other activities all successfully contributed to the Consortium's "awarenss stage." Results of activities were much like those anticipated and were accomplished without the need to ask E.O.F. for supplemental funds or other resources. Keeping these facts in mind, it is plausible to conclude that, on balance, the program's successes outweighed its failures.

VII. *Recommendations*

A description and evaluation of an eductional program would not be complete without recommendations for improving the program's operation. Such recommendations, gleaned from trial-and-error experience, may be applied in the future to make the planning and execution of program elements more effective. This is particularly appropriate for the Educational Consortium in Instruction which was expressly designed as a model for duplication elsewhere. The model may be adapted to any institution where non-traditional students might be helped by innovative teaching-learning arrangements. (See Appendix A for a graphic representation of that model.) The recommendations listed below do not necessarily follow in order of priority:

(1). Program funding should be increased to allow the distribution of small grants to individual faculty for teaching-learning experiments and other activities.

(2). A full-time coordinator should be appointed who can devote all of her/his attention to the program.

(3). Steps must be taken to secure recognition of faculty involvement by the Appointments and Promotions Committee.

(4). Make sure that key departments, e.g., Education, Psychology, are made integral parts of the project to utilize their expertise in teaching-learning matters.

(5). If funds and other resources are limited, then direct the program's focus on the institution only.

(6). If funds and other resources are more readily available, then direct some of the program's focus to the community by fostering better school-college relations.

(7). Fill program staff positions as soon as possible to facilitate the early start of activities.

(8). Students should be encouraged to participate more actîvely in the workshops, seminars, and experiments.

(9). Provision ought to be made for closer consultation between program staff and faculty in the design of innovative teaching-learning projects.

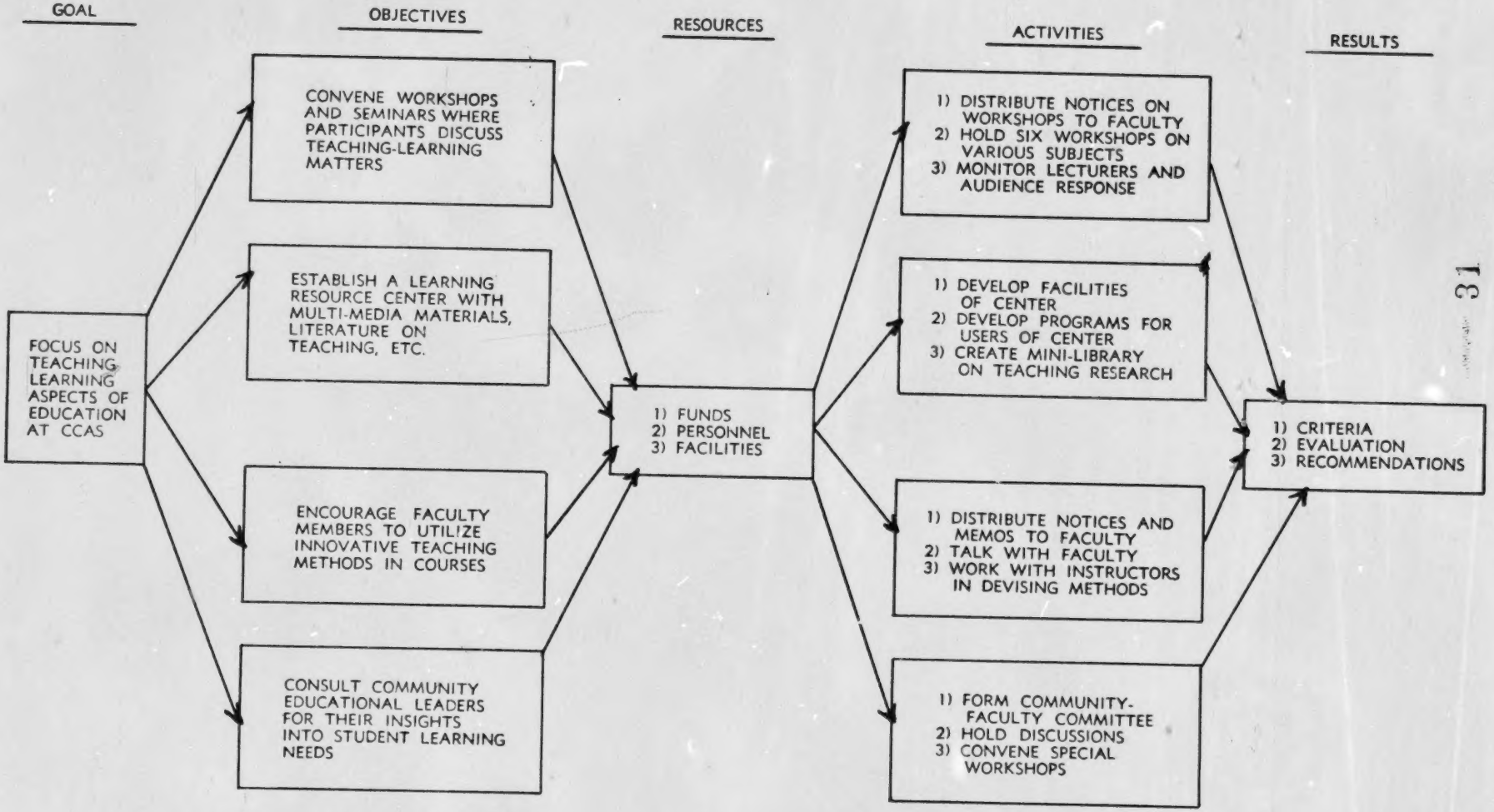
(10). It would be helpful to establish regular communication channels, e.g., monthly memos and newsletters, special seminars, etc., with faculty and students.

(11). If at all possible, follow the program's "awareness stage" with a "development stage" in which new teaching-learning insights may be applied directly to instruction.

APPENDIX A

MODEL FOR DEVELOPMENT AND EVALUATION OF
THE EDUCATIONAL CONSORTIUM IN INSTRUCTION

ACADEMIC FOUNDATIONS DEPARTMENT
RUTGERS UNIVERSITY, CAMDEN, N. J.


GOAL
OBJECTIVES
RESOURCES
ACTIVITIES
RESULTS
FOCUS ON TEACHING-LEARNING ASPECTS OF EDUCATION AT CCAS
CONVENE WORKSHOPS AND SEMINARS WHERE PARTICIPANTS DISCUSS TEACHING-LEARNING MATTERS
ESTABLISH A LEARNING RESOURCE CENTER WITH MULTI-MEDIA MATERIALS, LITERATURE ON TEACHING, ETC.
ENCOURAGE FACULTY MEMBERS TO UTILIZE INNOVATIVE TEACHING METHODS IN COURSES
CONSULT COMMUNITY EDUCATIONAL LEADERS FOR THEIR INSIGHTS INTO STUDENT LEARNING NEEDS
1) FUNDS
2) PERSONNEL
3) FACILITIES
1) DISTRIBUTE NOTICES ON WORKSHOPS TO FACULTY
2) HOLD SIX WORKSHOPS ON VARIOUS SUBJECTS
3) MONITOR LECTURERS AND AUDIENCE RESPONSE
1) DEVELOP FACILITIES OF CENTER
2) DEVELOP PROGRAMS FOR USERS OF CENTER
3) CREATE MINI-LIBRARY ON TEACHING RESEARCH
1) DISTRIBUTE NOTICES AND MEMOS TO FACULTY
2) TALK WITH FACULTY
3) WORK WITH INSTRUCTORS IN DEVISING METHODS
1) FORM COMMUNITY-FACULTY COMMITTEE
2) HOLD DISCUSSIONS
3) CONVENE SPECIAL WORKSHOPS
1) CRITERIA
2) EVALUATION
3) RECOMMENDATIONS

APPENDIX B

State of New Jersey
Department of Higher Education
Educational Opportunity Fund

E.O.F. D7
7/73

E.O.F. ACADEMIC YEAR BUDGET REQUEST
INNOVATIVE EDUCATIONAL PROJECTS

Account #27-9405

Name of Institution: Rutgers University Code: 875

Date Submitted: February 8, 1974 (REVISED July 25, 1974)

Submitted as Budget Request for Academic Year 1974 - 1975

Signatures:

E.O.F. Director: Ruth F. Dixon

President or
Designated Representative: Walter K. Gordon, Dean

Budget Summary
(enter totals from sheets 1 through 7)

		"Column I" Total Cost	"Column II" E.O.F. Share
1. Personnel—Salaries and Wages	#120	20,747	19,001
Enter Fringe Benefits for Item 1		3,461	-0-
2. Community Services		-0-	-0-
3. Travel		-0-	-0-
4. Other Administrative Services	#210	1,935	1,935
TOTALS		26,143	20,936

Sources of Total Cost:

E.O.F. (total of Column II):	$20,936
Institution (including in-kind):	5,207
Federal (specify)	
Other (specify):	
Total (must equal total of Column I):	$26,143

1A. Personnel—Salaries and Wages

No. of Persons	Descriptive Title or Position	No. of Mos. or Wks. (Specify)	% Time with E.O.F.	Total Salaries or Wages	E.O.F. Share
	A. Administrative Personnel #120				
1	Coordinator of Language Arts—				
	Miriam Chaplin	12 mos.	10%	1,746	-0-
	Clerical				
1	Sr. Clerk Stenographer	12 mos.	100%	(9-01) 6,152	6,152
	(To be appointed)				
	B. Student Services Personnel				
	1. Counseling				
	2. Tutoring				
		Sub-total		7,898	6,152

1B. Personnel—Salaries and Wages

No. of Persons	Descriptive Title or Position	No. of Mos. or Wks. (Specify)	% Time with E.O.F.	Total Salaries or Wages	E.O.F. Share
	3. Developmental Staff				
2	Researchers—Part-time at $5,224.50 ea.	12 mos.	100	(21-01) 11,049	11,049
	#120				
9	Consultants at $200/da/ea #311		100	1,800	1,800
	Seminars				
	1. Test Construction				
	2. Language Development in a College Curriculum				
	3. Instructional Activities Across Discipline Lines				
	4. Humanizing the College Curriculum				
	5. Defining the Role of an Urban University				
	6. The Value of a Learning Resource Center				
	Sub-Total			12,849	12,849
	C. Totals				
	(1) Paid Professional Personnel			14,595	12,849
	(2) Paid Non-Professional Personnel			6,152	6,152
	(3) Student Assistants			-0-	-0-
	(4) Fringe Benefits		16.68%	3,461	-0-
	Grand Total			24,208	19,001

2. Other Administrative Services

Category	Specific Purpose or Item, and Cost Basis	Total Cost	E.O.F. Share
Specify Services			
#210	Materials and Supplies		
	Office Supplies	600	600
#210	Educational Materials	100	100
#210	Educational Research Literature	635	635
	(To be selected)		
#210	Miscellaneous Expenditures		
	Coffee and Danish for Seminars		
	at $100. ea. (6 workshops for 200		
	persons at $.50 ea.	600	600
	Totals	1,935	1,935

Rutgers University

Camden College of Arts and Sciences

1974-75 E.O.F. Program Support Working Budget-Acct. #27-9405

Innovative Educational Projects

Object Class Code	Cost Element	No. Wtd. Pos.	Total Dollars
120	Administration & Student Support	2.0	19,001
120	Clerical Personnel		
125	Student Wages		
210	Materials and Supplies		1,935
301	Travel		
308	Subscriptions-Memberships		
311	Professional Services		
312	Educational Services		
330	Cultural Enrichment		
345	Rentals		
410	Repairs and Maintenance-Equipment		
710	Capital Equipment		
		Total	20,936

Walter K. Gordon

Walter K. Gordon, Dean

Ruth F. Dixon

Ruth F. Dixon, Director

APPENDIX C

Memo to the Faculty—No. 2

SAMPLE LIST OF INNOVATIVE COLLEGE TEACHING METHODS AND ARRANGEMENTS

The following list enumerates some examples of recently-applied teaching methods used both inside and outside of the classroom, as well as new institutional arrangements that some universities and colleges have applied to the teaching-learning relationship. The list is not meant to be an instructional guide, but rather is intended to stimulate discussion on creative teaching procedures.

Future memos will describe other research topics and activities undertaken by the Educational Consortium in Instruction, a group of faculty, students and community educational leaders who wish to focus on the teaching-learning relationship here at RUCCAS. Please consult Memo No. 1 for an outline of the Consortium goals. Anyone who is interested in joining the Educational Consortium or contributing to its objectives should contact Miriam Chaplin (ext. 237) or Frank Fratoe (ext. 394) of the Academic Foundations Department.

Frank A. Fratoe

A. Innovative Classroom Teaching Methods

(1). *Role-Playing (Sociodrama)*

In the role-playing method, students enact the roles of real or fictitious persons in a social situation. Role-playing is especially valuable for giving the student insights into group processes and for relating academic material to the larger social world. The role-playing sequence involves these steps: Selecting the issue or problem to be dealt with in class; explaining to students the educational purposes of the drama and the setting, general characterizations, and possible courses of action within the problem situation; briefing the actors so they may better understand the parts they are to play; briefing the audience to give them specific points to look for or to assign participative roles to audience members; enacting the drama; analyzing the drama through discussion with actors and audience; evaluating the drama to ascertain the extent to which educational purposes have been achieved.
(Especially appropriate for courses in the social sciences and humanities.)

(2). *Panel Discussion*

Panel discussion is, in effect, a seminar held within the context of a larger class setting. A small group of "experts" (either students or outside speakers or a combination of both) who are knowledgeable in a particular subject are chosen to discuss it before the class. Ideally, the discussion is an ongoing interplay among the panel members—with agreement, disagreement, qualification, and point elaboration. The instructor acts as panel chairman to keep discussion focused within the prescribed subject area, invite nonparticipants to talk, and give an occasional summary to suggest how the discussion has progressed. Once the panel has finished its presentation, other class members are invited to ask questions or make comments. The chairman may summarize the entire discussion at the end. A forum is a more structured version of panel discussion in which a topic is formally presented by several students in succession and followed by a group commentary.
(Applicable to virtually all disciplines)

(3). *Buzz Groups*

The buzz group method encourages maximum student participation in discussions. It is initiated by the instructor or another speaker who makes a presentation on a particular subject. The class is then divided into small subgroups which are given a few minutes to select a discussion leader and a reporter. Each discussion leader is responsible for seeing that all members of his group express themselves about the presentation. After a short period, subgroups are reformed into the original larger class. Each reporter is then asked to give a summary of reactions to the presentation and convey questions raised by his subgroup to the speaker. These questions may be answered as they are presented or after all subgroups have reported.
(Applicable to almost all discipilines.)

(4). *Team Teaching*

Under the team teaching concept, two or more instructors (and possibly other supporting specialists) work together to teach the same group of students. Their work may be divided in any one of several ways, but a common pattern is to have different instructors take specialized responsibilities for certain portions of the course. At the outset of this cooperative venture, members of the teaching staff should agree upon course objectives and determine the learning activities that would best accomplish their educational purposes. They may wish to combine several methods (lecture, discussion, role-playing,

etc.) to maintain student motivation. As the course progresses, instructors may find it useful to evaluate their teaching techniques and offer suggestions for possible improvement. Team teaching gives individual instructors the opportunity to specialize in those aspects of a course for which they are most qualified. It also exposes students to a variety of points of view and instructor personalities.
(Appropriate for all disciplines)

(5). *Simulation Gaming*

A simulation game applied to teaching is a working model of a life-situation in which students are required to be contestants who can see the consequences of their actions and make new decisions accordingly. Games are designed to teach students particular concepts, procedures, and logical relations that are intrinsic to a given subject, and the student is expected to demonstrate his understanding of certain principles basic to the subject. The components of a simulation game are: *roles* which identify the system of decision makers; *goals* which are assigned to each role to orient the actors behavior in the game; *resources* assigned to each role to assist the actors in meeting their goals; *rules* which describe how a game is put into play and the general order in which play proceeds; and *procedural materials* such as playing boards, chips, markers, spinners, chance cards, etc. A better understanding of simulation games can be obtained from the descriptions below.
(Applicable to most desciplines.)

The following is a representative list of educational games for college students (a complete list can be obtained from: Zuckerman, David W. & Horn, Robert F. *The Guide to Simulation Games for Education and Training.* Information Resources, Inc., 1675 Massachusetts Ave., Cambridge, Mass. 02138):

American Constitutional Convention

Description: Players are delegates to Philadelphia Convention of 1787. Game confronts students with political problems faced by founding Fathers, as well as more general questions of political philosophy that influence any political system.

Playing time: 2-6 hours in 1-hour periods.
No. of players: 32-49 divided into 13 teams
Available from: Science Research Associates, 259 E. Erie Street, Chicago, Illinois 60611.

Banking

Description: Players are decision makers in three commercial banks making investment and loan decisions. Game simulates the problems, opportunities and plans of commercial banks in day-to-day operations.

Playing time: 2-4 hours in 30-minute periods.
No. of players: Minimum of 3, no maximum.
Available from: Science Research Associates, 259 E. Erie Street, Chicago, Illinois 60611.

Bux

Description: Players are members of management team that tries to make profits for a corporation. Game teaches concepts of inventory sales, deficit financing, effect of advertising, research and development, etc.

Playing time: 3-8 hours

No. of players: 15-35.
Available from: Simile II, P.O. Box 1023, La Jolla, Calif. 92037

Clug: Community Land Use Game

Description: Players are community businessmen. Game involves processes of urban economics and land development in a metropolitan area. Desk calculator or slide rule recommended.

Playing time: 4-10 hours in 30-minute periods.
No. of players: 3-15 in 3-5 teams.
Available from: The Free Press, 866 Third Ave., New York, N. Y. 10022.

Consumer

Description: Players are consumers, credit agents, store owners, etc. Game provides insights into practical problems and economics of installment buying.

Playing time: 1½-2½ hours in 40-minute periods
No. of players: 11-34
Available from: Western Publishing Co., School and Library Department, 850 Third Ave., New York, N. Y. 10022

Contract Negotiations

Description: Players are union and management representatives engaged in contract bargaining. Game orients students to the strategy of labor negotiations and collective bargaining.

Playing time: 3-6 hours in 30-120 minute periods.
No. of players: 8-15
Available from: MacMillan Co., 866 Third Ave., New York, N. Y. 10022.

Diplomacy

Description: Players represent seven European countries: England, Germany, Russia, Turkey, Austria-Hungary, Italy, and France. Game demonstrates the military and diplomatic power structure of Europe before World War I.

Playing time: 4-8 hours in 2-hour periods.
No. of players: 4-7
Available from: Games Research, Inc., 48 Wareham Street, Boston, Mass. 02118

Disaster

Description: Players are members of a community disrupted by natural disaster (fire, flood, tornado, etc.). Game informs students of the structure of community activity under stress.

Playing time: 3-6 hours in 40 minute periods.
No. of players: 6-16.
Available from: Western Publishing Co., School and Library Department, 850 Third Ave., New York, N. Y. 10022.

Equations

Description: Game provides a situation for learning some of the elementary operations in mathematics; also gives practice in abstract thinking and teaches mathematical logic.

Playing time: 20 minutes to 1 hour.

No. of players: 2-8

Available from: International Learning Corporation, 440 E. Las Olas Blvd., Fort Lauderdale, Florida 33301.

Human Relations: One Dimension of Teaching

Description: Players represent students and elementary teachers at an inner-city school. Game helps education students develop decision-making capability and identify those principles that make for effective human relationships.

Playing time: 4 hours

No. of players: 12 to unlimited

Available from: Center for Innovations in Teacher Education, School of Education, Indiana University, Bloomington, Ind. 47401.

Inner City Planning

Description: Players are members of special interest groups in an urban renewal area: planning authority, public housing agency, community representatives, businessmen, educators, etc. Game helps students gain knowledge about problems of inner-city living and conflict of special interests.

Playing time: 3-5 hours in 40-minute periods.

No. of players: 12-40 in 3-5 teams

Available from: MacMillan Co., 866 Third Ave., New York, N. Y. 10022

Inter-Nation Simulation

Description: Players represent heads of state, foreign policy advisers, domestic affairs advisers, diplomats, leaders of opposition, etc. Game simulates the main political, economic, and military aspects of an international situation and teaches dynamics of decision-making on an international scale.

Playing time: 5 hours in 1-hour periods

No. of players: 24-50 in 5-6 teams

Available from: Science Research Associates, 259 E. Erie Street, Chicago, Illinois 60611

Management Decision Simulation

Description: Players represent the top managements of competing companies sharing the market for a single product. Game allows players to simulate procedures and study underlying concepts pertinent to industrial administration.

Playing time: 5 hours in 30-minute periods.

No. of players: 15-32

Available from: McGraw Hill Book Co., 1221 Avenue of the Americans, New York, N. Y. 10020

NAPOLI: National Politics

Description: Players, who represent two political parties and eight geographical regions, are members of a legislative body. Game teaches students about the legislative process as influenced by party and regional affiliations.

Playing time: 3 hours in 1-hour periods.

No. of players: 9-33

Available from: Simile II, P.O. Box 1023, La Jolla, Calif. 92037

National Economy

Description: Players are businessmen on an economic policy committee, separated into producers of consumer goods, luxury goods, and producer goods. Game aids understanding of relationship between growth, inflation, national income, and unemployment.

Playing time: 2-5 hours in 30-minute periods
No. of players: minimum of 3, no maximum
Available from: Science Research Associates, 259 E. Erie Street, Chicago Illinois 60611

Plans

Description: Players are members of interest groups (military, civil rights, nationalists, internationalists, business, and labor) who use their influence to produce changes in American society. Game illustrates conflicts between powerful interest groups.

Playing time: 4 hours in 50-minute periods
No. of players: 12-36 in 6 teams
Available from: Simile II, P.O. Box 1023, La Jolla, Calif. 92037

Simsoc

Description: Players are citizens in a society under stress-conditions such that they must actively question nature of social order and examine processes of social conflict and social control. Game makes social science material more vivid.

Playing time: 6 hours in 1-hour periods
No. of players: 20-60 in 4 teams
Available from: The Free Press, 866 Third Ave., New York, N. Y. 10022

Simulation, The Decision Making Model

Description: Players are government officials and influential citizens in 3-5 nations. Game demonstrates international decision-making process.

Playing time: 4 hours in 45-minute periods
No. of players: 16-50 in 3-5 teams
Available from: World Affairs Council of Philadelphia, John Wanamaker Store, Third Floor Gallery, 13th and Walnut Street, Philadelphia, Pa. 19107

Starpower

Description: Players are members of a low mobility, three tiered society. Game simulates, in abstract form, the relationship between wealth and power in human societies.

Playing time: 2 hours
No. of players: 1-36
Available from: Simile II, P.O. Box 1023, La Jolla, Calif. 92037

Transaction: The Authentic Stock Market Game

Description: Players are brokers, advisers, chairmen of investment clubs, treasurers of mutual funds, etc., who try to make profits in the stock market.

Playing time: 1 hour minimum, no maximum
No. of players: 2-25
Available from: Entelek, Inc., 42 Pleasant Street, Newburyport, Mass. 01950

B. Innovative Extra-Classroom Methods

(1). *Programmed Instruction*

Programmed instruction refers to the use of directed or programmed lessons presented in printed form in books, manually or electronically-operated teaching machines, or computer-controlled teaching machines. It is designed to allow the student to proceed at his own rate of learning. The subject matter to be taught is broken up into small units called frames (usually a few sentences). The student must respond to at least part of each frame by answering a question or filling in a blank. He is immediately informed of the correctness of the answer. In linear programming, the material is arranged in a single ordered sequence and every student must proceed from the first item to the last. In branch programming, more than one sequence or route through the material is arranged, and the student follows the sequence determined by his own answers.
(Applicable to most disciplines).

(2). *Personalized System of Instruction.*

The personalized system of instruction (PSI) is a general term that includes a number of similar teaching techniques (contigency management, precision teaching, self-paced supervised study, individually prescribed instruction, mastery learning, Keller plan, etc.) PSI is a type of programmed instruction, but with many added features. A course taught through PSI methods is organized into a number of semi-autonomous units (modules) e.g., one unit per week, or one unit per chapter, or in terms of specific bodies of information and procedures. Each student begins with the first modular unit and proceeds through an established sequence. When a student believes he has mastered a unit he is given some means of demonstrating his mastery, such as an essay or objective test. A student who "fails" an exam must undergo further study and testing until he shows competence in the unit's subject matter. The course is completed when the student has mastered all the prescribed modules. Undergraduates who have completed the course are often used as proctors or tutors to administer examinations and aid the new student in his preparations for further testing or for advancing to the next unit. The professor in charge has overall authority for planning the study modules and supervising the tutors. He may also hold occasional discussion sections or lectures.
(Applicable to virtually all disciplines.)

(3). *Audio-Tutorial Instruction*

Audio-tutorial teaching combines PSI with more traditional techniques of instruction. A course taught by audio-tutorial methods includes three types of sessions: (1) the *General Assembly Session* for all students, held weekly and devoted mostly to special lectures, film showings, guest speakers, announcements, and other course details, (2) *Small Assembly Sessions,* also held weekly, that serve as quiz-discussion sections where a small number of students have an opportunity to discuss course materials and be tested on what they have learned; (3) *Independent Study Sessions,* attended by students for an indeterminate number of hours each week, where class members work at individual carrels equipped with tape playbacks and reviewing equipment. Graduate teaching assistants are available during the study sessions to provide assistance when needed.
(Especially suitable for laboratory courses in the physical sciences, but may be applied to other disciplines as well)

(4). *Computer-Assisted Instruction*

One form of computer-assisted instruction (CAI) entails use of the computer as a

medium for presenting instruction directly to the student. In this case, CAI is a form of Programmed Learning. The student sits at a terminal (usually a typewriter that is connected with a computer), gives answers to questions presented by the computer, and receives reactions to each answer with instructions for the next step, the nature of which depends upon whether the answer given was right or wrong. A full record of student responses is made by the computer. Later, this record may be summarized for an entire group of participants or for each separate student who uses the program. Such information provides the student with self-study clues to improve performance and gives the instructor pointers on course improvement. Computers can also be used to supplement the teaching function in several other ways: conducting simulations and games, doing problem-solving research, storing and processing data, etc.
(Applicable to many disciplines)

(5). *Team Learning*

The team learning approach involves dividing members of a course into various small groups. Representatives in each group are then asked to articulate those issues they feel are most important for purposes of study and decide which issues they wish to pursue. Students are then responsible for determining together the questions they must answer in their research and for determining the duties and responsibilities of each member in answering these questions. Members are encouraged to advise, assist, and criticize each other whenever possible. The group leader serves as unifier and coordinator, periodically reporting his group's progress to the instructor who serves as resource agent. At the end of the semester, each group presents its findings before the entire class, encouraging response and criticism. Team learning seems to be most useful in teaching interpersonal skills in a group, problem-solving situation.
(Appropriate for most disciplines)

C. Innovative Teaching Arrangements

(1). *Cooperative Work-Study Education*

Cooperative work-study education or, as it is sometimes called, experiential learning was inaugurated earlier in this century at such institutions as the University of Cincinnati, MIT, and Antioch College; by 1970 nearly two hundred colleges and universities had co-op programs. Cooperative education requires some minimum amount of work experience for each student along with minimum standards of academic performance. Under some plans, students alternate periods of full-time study with periods of full-time employment in industry, business, government, or service organizations. In other plans, students concurrently engage in part-time work. Work-study programs provide an opportunity for students to live in a different environment and force them to cope with nonacademic responsibilities. The experience also encourages active learning in a vocational or professional setting and the application of academic training to those settings. Therefore, each student's work experience is designed to be an integral part of his overall educational program and the institution takes responsibility for this integration.

(2). *Contract Teaching*

Contract plans, in which students and instructors formally agree to course or program requirements, remove traditional credit compilation and four-year residence requirements from the undergraduate curriculum. This feature can be illustrated by a description of contract teaching as applied at Johnston College, University of Redlands (Calif.). Each semester students and faculty negotiate the curriculum to be offered on an individual basis.

Students list the topics they wish to pursue, while faculty post their own preferences as limited by special competencies. Individual students and instructors then create a written contract which specifies the parties to the contract, course objectives, reading lists or other study resources, deadlines for completion of work, and methods by which evaluation will be conducted (tests, papers, oral reports, projects, etc.). During a student's second year, he must ask his adviser to help him draw up a graduation contract, specifying the requirements for a baccalaureate degree, which is then presented for approval to a graduation committee consisting of at least three faculty members. These members evaluate the contract and have the option to recommend changes in the terms. When the student feels he has fulfilled his graduation contract (there is no time limit), he appears before the committee for examination. The Johnston College plan and others like it encourage student initiative in creating personalized study programs.

(3). *Learning Resource Centers*

Learning resource centers (instructional media centers, etc.) are facilities with multimedia study materials such as tape recordings, microfilm, television, overhead transparencies, and so on. These media are made available to students in special rooms or at individual carrels. The study materials are purchased from publishers and manufacturers or are "custom-designed" to meet the particular requirements of different instructors. Staff members work with instructors to identify learning objectives and then develop methods and materials to fit those objectives. Some LRC's have their own production studios where slides, filmstrips, audio and video tape recordings are made. Learning resource centers not only foster an individual approach to student learning but also allow institutions of higher education to utilize newly-developed educational materials that are more expensive and less portable than printed media. Earlier LRC's were located at Florida Atlantic University, Oakland College, and several of the State University of New York institutions. However, they are now present on many campuses.

(4). *Interdisciplinary Programs*

Interdisciplinary programs (coordinated studies, thematic studies, etc.) allow each student to become involved with a systematic, interdisciplinary analysis of a complex academic problem. Reading, research, and classwork are focused toward issues that are not always included in traditional department-based offerings. Thematic studies also encourage faculty members from diverse disciplines to deal cooperatively with common intellectual matters. For example at Evergreen State College (Washington) approximately one hundred students and five instructors work together for periods as long as one year on such interdisciplinary topics as "Causality, Freedom, and Chance," "Contemporary American Minorities," "the Individual, the Citizen, and the State," etc. The student is expected to spend up to thirty-two hours a week with faculty members in various kinds of learning experiences. A student may earn a full year's credit by participating in only one program. At the University of Wisconsin, Green Bay, a similar arrangement has been adopted whereby students may concentrate on certain environmental themes like "Ecosystems Analysis," "Environmental Control," "Population Dynamics," and "Urban Analysis." A concentration encompasses several academic disciplines but knowledge from each is focused on the problem studied. At times, members of the community are invited to participate in the creation and implementation of academic programs.

(5). *Residential Colleges*

Residential colleges (living-learning centers, inner colleges, etc.) attempt to integrate classroom and residential experience by bringing academic study closer to the realm of

students' social and personal life. They also are intended to stimulate accord between teachers and students within a cohesive, scholarly community. Two institutional-level programs at the University of Michigan will illustrate these living-learning concepts. When a freshman enrolls in the Pilot Program he discovers that some of his courses are attended by acquaintances from his dormitory floor and that other classes are actually held within his residence hall. He also associates with Resident Fellows who are graduate students selected partly to function as "living-in" advisers, but also to be somewhat older models of a serious commitment to scholarly life. The RF's assist students with academic programs and personal difficulties, although they are not expected to act as professional counselors. Common social activities are also held regularly. The Residential College, on the other hand, is an entirely separate entity within the University, occupying a quadrangle in which classrooms, offices, and student residences are located. Students in the Residential College pursue a four-year program in liberal arts and may undertake interdisciplinary concentrations as well as majors in the usual departmental areas. Instructors are chosen on the basis of their interest in innovative education and their desire to work closely with students, both formally and informally.

(6). *Nonresidential Colleges*

Nonresidential or open colleges are designed primarily to reach "nontraditional" students, e.g., employed adults, retired people pursuing new careers, veterans, etc. These people may not be able to reside on campus or to attend classes on a regular basis. They must be reached, therefore, by instructional techniques and learning experiences not limited to the classroom. Minnesota Metropolitan State College is one example of a nonresidential institution. It does not have centralized facilities, is designed for those above normal college age, utilizes community rather than regular faculty members, and grants degrees by measuring student competence in certain academic areas—not by counting credit hours. The Bachelor of Liberal Studies program at the University of Oklahoma is another nonresidential arrangement created for adults. The BLS program relies heavily upon guided independent study and short, but intensive, residential seminars that allow the student to pursue his work at whatever pace he desires. The Open University in Great Britain offers instruction through television, radio, correspondence, and local study centers staffed by counselors who assist students in planning their programs and by tutors who are local experts in each course. Empire State College (New York) is a reduced and somewhat altered version of the Open University.

APPENDIX D

READING IMPROVEMENT—114

General Course Objectives

I. To provide a comprehensive review program in:

A. Study Skills

1. Lecture-Notetaking
2. SQ3R
3. Examination-taking techniques
4. General studying procedures

B. Comprehension

1. Main Idea
2. Paragraph Development
3. Paragraph Organization
4. Coherency Techniques
5. Summaries

II. To provide comprehension skill development in:

A. Critical Interpretation

1. Author's authority
2. Fact vs. Opinion
3. Tone, Intent, Bias
4. Propaganda
5. Non-Persuasive Material

B. Speed Development

1. Visual Perception
2. Flexibility
3. Speed Improvement
4. Skimming Scanning

C. Vocabulary

1. Context Clues
2. Roots, Prefixes, Suffixes

CONTROL GROUP
SECTION I

STUDY SKILLS

1. After students have completed Chapter 11, the teacher will explain and illustrate the basic SQ3R technique. Twenty-five percent of the chapter's exercises will be completed at home with the remaining exercises utilized as practice in the classroom setting.
2. Students will apply SQ3R to given or student selected periodical article.
3. Students will be given two lectures on examination techniques, note-taking techniques, and general study habits.

EXPERIMENTAL GROUP
SECTION II

1. After reading and completing seventy-five percent of the exercises in Chapter 11, the students will discuss and explain the technique in class. (Teacher will lead and elicit information where necessary.)
2. Students will apply SQ3R to a student selected periodical article.
3. Students will be given two class settings for discussion in small groups on techniques for taking notes, preparing for examinations, and general study habits. Groups will then share their information with the class compiling a general set of guidelines for the above mentioned study techniques.

CONTROL GROUP
SECTION I

COMPREHENSION SKILLS

1. Before and after reading Chapters 1, 3, and 4 of class textbook, students will be given illustration, explanation, and practice in main idea paragraph organization, and coherency techniques. Students will complete seventy-five percent of the accompanying exercises at home with teacher explanation and correction in the succeeding class meeting.
2. Students will apply above stated skill to a periodical article.
3. Students will be given a lecture, illustration, and practice in the formulation of summaries. They will be required to formulate a summary of their journal article.

EXPERIMENTAL GROUP
SECTION II

1. Students will read and discuss in small groups of their own choosing Chapter 1, 3, and 4, and will complete seventy-five percent of all exercises.
2. Small groups will then present to the class explanation, illustration, and practice of each skill.
3. Students will apply above stated skills to their periodical article.
4. Students will analyze examples of summaries, deduce the necessary components, and formulate a summary of their journal article.

CRITICAL INTERPRETATION
SECTION I

1. Students will be given explanation, illustrations and practice on tone, intent, etc. incorporated in Chapters 7, 8, 9 and 10. Textbook chapters will be read in total by all students and utilized for practice and discussion.
2. Students will formulate a critical analysis of their journal article following the format given by the instructor.
3. Students will be given explanation and practice on propaganda devices and fallacious reasoning processes.
4. Students under the instructor's direction will analyze Jonathan Swift's Modest Proposal and a modern version by Gene Lee for discussion and analysis of satire and irony.

SECTION II

1. Students will work through chapters 7, 8, 9 and 10 individually or in small groups discussing, interpreting and analyzing the exercises. Each group or individual will select one skill which he will present to the entire class.
2. Students will formulate a critical analysis of their journal article following a format designed by the class.
3. Same as control group.
4. Same as control group except no direction by the instructor.

CONTROL GROUP

SECTION I
SPEED DEVELOPMENT

1. The students will be given one-half of a class meeting per week which will be devoted to timed reading exercises.
2. The students will be given explanation, illustration, and practice on skimming techniques for newspaper, magazines, and chapters, scanning techniques on various types of materials, and visual perception exercises.
3. The students will be given twelve readings utilizing the controlled reader.

EXPERIMENTAL GROUP
SECTION II

1. One class per week throughout the semester will be devoted to explanation and practice of visual perception techniques, skimming newspapers, magazines and chapters; and scanning techniques. The class will separate into two groups with one group attending class or above speed exercises, and the other group utilizing the controlled reader. Groups alternate areas of speed development each week.
2. Additional time 7-10 days at the end of the semester will be devoted to any speed skills not completed via the above procedure.
3. Students will be given timed readings twice per month.

CONTROL GROUP
SECTION I

VOCABULARY SKILLS

1. Students will be given explanation and practice of one vocabulary lesson in roots, prefixes, or suffixes every two weeks. Instruction will follow format of assigned text.
2. Students will be given a review designed by the teacher of each lesson prior to testing.
3. Students will read and complete all exercises in Chapte and 7 on context clues. Explanation, illustration and practice will accompany .eading.
4. Students will read and discuss Chapter 6 on use of the dictionary. Minimal practice will be incorporated in other exercises throughout the semester.

EXPERIMENTAL GROUP
SECTION II

1. Students will complete individually or in small groups one vocabulary lesson every two weeks. Groups will come together and discuss skills or complete exercises during some class sessions.
2. Students will prepare review exercises for each vocabulary lesson to be completed by the entire class before each vocabulary test.
3. Students will read and complete chapters 5, 6; they will complete all exercises in Chapter 5 which will be student-lead discussed in a class meeting. Chapter 6 will entail reading only.
4. Chapter 7 will be discussed with critical interpretation.

TESTING/EVALUATION:

1. All students will be given a pre (1st day of semester) and post-test (May 9th) on Form B of the McGraw Hill Basic Skills Test.
2. All students will receive a teacher made vocabulary test every two weeks. Each test will incorporate vocabulary from previous lessons.
3. All students will receive a teacher-made skills test on Chapters 1, 3, 4 and 11 and a teacher-made test on Chapters 7, 8, 9 and 10.
4. All students will be given mini-exercises throughout the semester which will receive satisfactory or unsatisfactory grades.
5. The Experimental group will receive grades for their oral presentation.
6. All tests will be used diagnostically; so that reteaching of any particular skill can be facilitated.

ANALYSIS OF OBJECTIVES:

Because of emphasis upon continuous re-evaluation and diagnosis as an integral aspect of the reading course it was necessary to readapt and eliminate many of the anticipated objectives for both the control and experimental groups. It was deemed necessary not only because of the aforementioned reasons, but also because of the philosophical belief in quality rather than quantity skill development.

STUDY SKILLS

Due to the nature of both groups it was necessary to spend a considerable amount of the semester on study skills. It had been assumed that a minimum of three sessions would be sufficient to review the study skill techniques. However, after working with the students, it was realized that many of the techniques were new to a large proportion of the sections. Therefore, six class sessions for the control group and eight class sessions for the experimental group were devoted to study techniques. Furthermore, throughout the semester additional time was allotted to review or further analysis of particular techniques because of difficulties students were experiencing in their content subjects. Thus, it was considered by the instructor that since this course has been designed to aid students in performing well in content courses, reteaching and/or re-analysis was justifiable.

COMPREHENSION SKILLS

For the control group all objectives were met; however, the experimental group encountered a time difficulty in accomplishing their goals. It appeared that most students had been very accustomed to teacher-directed settings and were uncomfortable or unmotivated to work on their own. A core section of the class, approximately 50% worked diligently, enthusiastically, and efficiently on their projects. However, the other part of the group were sporadic in attendance and were inefficiently prepared in their assignments. Because of this group, as well as the necessity to expedite time, it was necessary for the instructor to direct several skills. It should be noted, though, wherever possible, concepts were elicited from the class rather than presented via a lecture to the students.

CRITICAL INTERPRETATION

For both the control and the experimental groups all objectives were met. The basic difference found between these groups was that the experimental section on the whole were unable to transfer their critical skills to diverse materials without the aid of the instructor. For example many were unable to recognize or explain the use of irony or satire in other selections besides "The Modest Proposal."

In addition, the experimental group took two weeks longer to fulfill all requirements which made it necessary for the instructor to give a lecture and mini-practice on propaganda devices and fallacious reasoning processes.

VOCABULARY

The students in both groups experienced considerable difficulty in mastering many vocabulary terms. Because of this three weeks were devoted to the first two lessons; this necessitated the elimination of several lessons in the text. Both groups completed five lessons instead of seven.

In the area of context clues, both groups performed as outlined in the objectives.

SPEED DEVELOPMENT

The control group spent approximately six additional class sessions on various speed techniques. This imbalance was due to two major factors. First, the group work performed by the experimental group entailed more time than the teacher-directed group. Thus, some skill area had to be limited. It was felt that speed was of less importance to the student than comprehension or critical interpretation. Second, there existed some confusion amongst the experimental group as to the alternate weeks that they were to attend the speed session. Many would attend two sessions in a row or would miss two sessions and attend on the wrong day; this caused some of the experimental group to have more speed skill development than others.

OVERALL EVALUATION

Throughout the semester, the instructor experienced difficulty keeping the experimental group totally student-directed. Inexperience for both the teacher and the students, time necessary for group work, and the need for a large portion of the semester to be devoted to study techniques, necessitated the instructor to adopt the pedagogic procedure. This consisted of some teacher direction via elicitation of responses by the students. (See each skill evaluation)

Overall student responses appeared favorable to group work, particularly in the area of analysis and interpretation of articles. However, despite their interest there was continual reliance upon the teacher for aid or reassurance of their conclusions. In addition, this enthusiasm was sporadic. Toward the latter part of the semester many students became less interested in group working, requesting more teacher-direction. These above conclusions were observed from the interaction and attendance by the students and observations of the teacher. In fact one of the biggest differences between the two groups was the attendance factor.

The control group on the whole maintained better attendance throughout the semester than the experimental group. The experimental group attendance held until the last month of classes. As mentioned previously, there appeared pedagogic reasons for this factor.

In the area of teacher-made tests, both groups appeared comparable grade-wise in all tests except on critical analysis. The experimental group had lower test scores on the whole than the control group.

From experiment, teacher-directed versus student-directed instruction, one might conclude that neither procedure in total is viable. A combination of techniques appears more efficient in a college-reading improvement course. The lack of credit for the course, the background/experience of the students, etc. may all be reasons for utilizing a combined technique.